

EXHIBIT A

Highly Confidential - Michael B. Glasgow

1 UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF MICHIGAN
3 SOUTHERN DIVISION
4 _____
5)
6) Civil Action No.
7) 5:16-cv-10444-JEL-MKM
8 In re: FLINT WATER CASES) (consolidated)
9)
10) Hon. Judith E. Levy
11) Mag. Mona K. Majzoub
12)
13 _____)

14 HIGHLY CONFIDENTIAL
15 VIDEOTAPED DEPOSITION OF MICHAEL B. GLASGOW
16 VOLUME I

17 Monday, February 24, 2020
18 at 9:05 a.m.

19 Taken at: Butzel Long
20 41000 Woodward Avenue
21 Bloomfield Hills, Michigan 48304

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14 ALSO PRESENT:

15 Neal Rogers, Videographer

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1 P R O C E E D I N G S

2 - - -

3 THE VIDEOGRAPHER: We are now on
4 the record. My name is Neal Rogers.
5 I'm a videographer for Golkow Litigation
6 Services. Today's date is February 24,
7 2020, and the time is approximately
8 9:05 a.m.

9 This video deposition is being
10 held in Bloomfield Hills, Michigan, in
11 re: Flint water cases, Civil Action No.
12 5-16-cv-10444-JEL-MKM, for the US
13 District Court, Eastern Division of
14 Michigan, Southern Division. The phone
15 is Michael Glasgow. Counsel will be
16 noted on the stenographic record.

17 The court reporter is Carol Kirk
18 who will now swear in the witness.

19 - - -

20 MICHAEL B. GLASGOW,
21 being by me first duly sworn, as hereinafter
22 certified, deposes and says as follows:

23 EXAMINATION

24

1 BY MR. CAMPBELL:

2 Q. Could you state your full name and
3 residential residence on the record, please.

4 A. Yes. Michael Brian Glasgow.
5 Residential address is 9363 Kristen Drive. And
6 that's Otisville, Michigan 48463.

7 Q. How long have you lived there?

8 A. About 12 years.

9 Q. Is it a fair conclusion for the
10 lawyers around the table to draw that you're
11 likely to be living at that address for the
12 foreseeable future?

13 A. Yes.

14 Q. So if we need to serve a subpoena
15 on you, that you would be an appropriate place
16 to do so?

17 A. Absolutely, yeah.

18 Q. Who employs you at this stage of
19 the game, Mr. Glasgow?

20 A. The village of Mayville.

21 Q. In what capacity?

22 A. I am their DPW director.

23 Q. What are your duties?

24 A. Oversee the water, sewage system,

1 roads, parks, everything for the small village.

2 Q. How long have you been employed by
3 the village of Mayville, please?

4 A. Just over three years.

5 Q. And what was your start date,
6 roughly?

7 A. I believe it was January 2nd of
8 '17.

9 Q. January 2 of 2017. Where did you
10 work before that?

11 A. The city of Flint.

12 Q. Okay. When did you start with the
13 city of Flint?

14 A. I believe it was April of '16 I
15 was put on administrative leave from the city.

16 Q. I think you misheard that. Let me
17 try it again.

18 When did you start with the city?

19 A. Oh, when did I start with the
20 city? Oh, I'm sorry. I started with the city
21 in August of 2001.

22 Q. So you were with the city for 15
23 years?

24 A. Yes.

1 Q. And you're saying in April of
2 2016, you were put on administrative leave?

3 A. Correct.

4 Q. Why?

5 A. To do with the Flint water cases.

6 Q. Okay. What about the Flint water
7 cases resulted in an administrative leave?

8 A. Oh, I believe it was criminal
9 charges that were originally filed.

10 Q. Okay. So the Attorney General or
11 the Attorney General's delegate filed criminal
12 charges against you and that lead to the
13 administrative suspension?

14 A. From my understanding, yes.

15 Q. Okay. And what were the charges
16 that were filed, please?

17 A. Oh, goodness. Misconduct in
18 office, and there two charges.

19 Q. Was one of them a felony?

20 A. Seems like one was, yes.

21 Q. Okay. And the person or entity
22 bringing the criminal charges against you was
23 the delegate of the Attorney General of the
24 State of Michigan?

1 A. Correct. Yes.

2 Q. And what was Mr. Flood?

3 A. Yes.

4 - - -

5 (Glasgow Deposition Exhibit 1 marked.)

6 - - -

7 BY MR. CAMPBELL:

8 Q. I previously marked before we
9 started, Mr. Glasgow, a set of transcripts as
10 Exhibit 1. We're starting up again with that
11 number for this deposition. It is before you
12 there.

13 Exhibit 1 is a collection of
14 transcripts from February 22, 2018, February 23,
15 2018, March 22, 2018, April 16, 2018, and
16 April 20, 2018.

17 Do you remember appearing in the
18 criminal court in Flint, Michigan on those days?

19 A. I do, yes.

20 Q. Okay. So you gave testimony over
21 the course of five full or partial days in the
22 criminal court involving criminal charges
23 against let's call them colleagues from the
24 Michigan Department of Environmental Quality;

1 Mr. Busch, Mr. Prysby, Mr. Cook, and
2 Ms. Shekter-Smith?

3 A. Yes.

4 Q. Is that right?

5 A. Yes.

6 Q. I marked that testimony -- or the
7 transcripts as Exhibit 1 so that you could have
8 it before you in the event anybody questions you
9 about it.

10 But is it fair for us to conclude
11 that over the course of those five full or
12 partial days, you gave a substantial recounting
13 of your knowledge of the facts and circumstances
14 related to the Flint water crisis?

15 A. Yes.

16 Q. That's not the only time you gave
17 either testimony or a statement related to the
18 Flint water crisis, correct?

19 A. Correct.

20 Q. Can you tell us what the other
21 occasions were when you gave testimony or
22 statements?

23 A. Okay. I think I originally gave
24 statements to the Attorney General. I was

1 subpoenaed and gave a deposition to Todd Flood,
2 the Attorney General.

3 I also had an interview with the
4 FBI out of Flint. And I also testified in front
5 of a state senate committee. I'm not even sure
6 what it was called, but in public with some of
7 the representatives of the state. I believe
8 that's all.

9 Q. Did you appear before the Congress
10 of the United States or any of its committees --

11 A. No.

12 Q. -- to give testimony.

13 I'll get to this at some point in
14 time, but you did give a statement to the
15 governor's task force on the Flint water crisis;
16 did you not?

17 A. Okay. Yes. Task force I did,
18 yes.

19 Q. In sum, on all of those occasions
20 where you either gave testimony, sworn testimony
21 under oath or you gave a statement, were the
22 facts and circumstances that you related to the
23 people who were questioning you true and
24 accurate, to the best of your knowledge?

1 A. Yes, absolutely.

2 Q. And all of the testimony that you
3 gave in the criminal court in Flint that's now
4 marked as Exhibit 1, the collection of
5 transcripts, that was true and accurate to the
6 best of your ability, correct?

7 A. Yes.

8 Q. You didn't try to deceive anyone
9 as you gave testimony in the court in front of
10 Judge Manley, did you?

11 A. No.

12 Q. Okay. You tried to be as full and
13 complete and comprehensive in answering any of
14 the questions that were presented to you; is
15 that correct?

16 A. Yes.

17 Q. All right. So let me start with
18 this: When you began at the city of Flint, what
19 department were you working in?

20 A. I was in water pollution control.
21 So I was hired in over at the wastewater
22 treatment plant.

23 Q. How long were you in the
24 wastewater treatment plant?

1 A. I believe roughly four years.

2 Q. So from 2001 to 2005?

3 A. Yes.

4 Q. What were your duties there?

5 A. I worked in the lab. I believe it
6 was part of the environmental compliance unit,
7 but basically it was lab testing and industry
8 inspections.

9 Q. Okay. Who was your supervisor?

10 A. At that time his name was Brad
11 Hill.

12 Q. Okay. And what did you next do
13 for the city of Flint?

14 A. After four years at the wastewater
15 plant, a job come up over at the water treatment
16 plant as lab supervisor. So I made that jump I
17 think in November of '05.

18 Q. And how long were you at the water
19 treatment plant as lab supervisor?

20 A. I was there until, I'm going to
21 say, 2015.

22 Q. What happened in 2015?

23 A. 2015, early 2015 -- I can't
24 remember the month.

1 Q. Did you say early?

2 A. Early 2015, yes, February, March
3 time frame. I interviewed for the job of
4 utilities director for the city of Flint.

5 Q. And was that the position that was
6 held by Duffy Johnson?

7 A. Correct. Yes.

8 Q. And you were promoted into that
9 position; is that right?

10 A. Correct. Yes.

11 Q. So from early 2015 until the
12 administrative leave in April of 2016, you were
13 the utilities director for the city of Flint?

14 A. Correct.

15 Q. What were the nature of your
16 duties as utilities director?

17 A. Oh, well, the utilities for the
18 city of Flint had to do with the wastewater
19 plant, the water treatment plant, and then the
20 distribution system for the water side, and also
21 the collection system for the wastewater side.

22 Q. Who was your supervisor when you
23 were utilities director?

24 A. Howard Croft. And he was the DPW

1 director.

2 Q. When did Mr. Croft leave that
3 position, to your knowledge?

4 A. To be honest, I don't remember.

5 Q. Were you on administrative leave
6 when he left that position?

7 A. I believe I was.

8 Q. Was he the person who delivered to
9 you the information that you were going on
10 administrative leave?

11 A. No, he did not deliver that to me.

12 Q. Who gave you that information?

13 A. I received a letter from the human
14 resources department with the city of Flint.

15 Q. No personal contact? Just a
16 letter?

17 A. Just a letter.

18 Q. All right. When you were the lab
19 supervisor at the water treatment plant, who was
20 your direct supervisor?

21 A. Oh, I went through a few
22 supervisors when I was there. I think when I
23 originally took the job, it was Jeff Bryson was
24 the water plant supervisor at that time.

1 Q. Okay.

2 A. And he didn't seem to be around
3 there very long. And then the next supervisor
4 was a William Daniels.

5 Q. Daniels?

6 A. Daniels, yep. D-a-n-i-e-l-s.

7 Q. How long was he there?

8 A. Oh, he was there for a few years
9 until he retired.

10 Q. Okay.

11 A. And then it was Brent Wright who
12 was the water plant supervisor there.

13 Q. He was initially appointed as
14 acting water treatment plant supervisor,
15 correct?

16 A. Correct. Yep.

17 Q. And did he become the permanent --

18 A. I don't know that he ever became
19 the permanent supervisor.

20 Q. Was Mr. Wright your direct
21 supervisor?

22 A. Yes.

23 Q. At some point in time when you
24 went to the water treatment plant, you received

1 some type of licensure from the state; did you
2 not?

3 A. Yes.

4 Q. Can you trace for us your
5 licensure with the state?

6 A. Oh, goodness. I would have
7 started not long after 2005 when I went to the
8 water treatment plant. I believe probably in
9 the next year, 2016, I took a state license for
10 treatment plant operation. I believe it was the
11 F-4. And the dates are going to get blurry in
12 my head, but --

13 Q. Well, just give us your best
14 memory.

15 A. -- long story short -- yeah, long
16 story short, I took the F-4 in 2016.

17 Q. 2006?

18 A. Or I'm sorry. 2006, yes. And a
19 year or two later, took the next license, which
20 was an F-3. And sometime, I believe 2010 or
21 2011, I believe able to take the F-2 and F-1
22 licenses as well for operation of a municipal
23 drinking water plant.

24 Q. Okay. Did you take the F-2 and

1 F-1 license examination or evaluation at the
2 same time?

3 A. I did, yes.

4 Q. Can you explain why that is so?

5 A. Well, I had qualified based on
6 experience to take the F-2. There was -- I
7 don't know if I want to say disagreements or
8 people with the state had a feeling I didn't
9 really qualify to take the F-1 due to the nature
10 of the city of Flint's water treatment plant at
11 that time, which was a backup plant, a standby
12 plant, if you will. So we weren't in operation
13 all the time.

14 So I had to go in front of a
15 committee of the state for them to decide
16 whether I could take the F-1 as well. So I was
17 already signed up to take the F-2. And a few
18 weeks before the test, they gave me permission
19 to write the F-1 as well.

20 Q. Okay. Was Mr. Daniels your
21 supervisor at the time?

22 A. Yes.

23 Q. Do you remember Mr. Daniels making
24 an application or request to the Michigan

1 Department of Environmental Quality for an
2 exception to be made so that you could get an
3 F-1 license?

4 A. Vaguely.

5 Q. Okay. Does that square with your
6 memory --

7 A. Yes.

8 Q. -- that that happened?

9 A. Uh-huh.

10 Q. And the issue or problem with the
11 F-1 license was that you didn't have the
12 requisite experience operating a full-time water
13 treatment plant that otherwise would be
14 necessary to get that license; is that right?

15 MR. MARKER: I'm going to object
16 to form and foundation.

17 Go ahead and answer if you can.

18 A. Can you restate that? I'm sorry.

19 Q. I'll try it a different way.

20 When you sit for these exams, an
21 F-2 or F-1, there's sort of an academic exam,
22 questions and answers, like a test, right?

23 A. Correct. Yes.

24 Q. And part of it is filling out an

1 application that demonstrates your experience,
2 correct?

3 A. Correct.

4 Q. And the issue that you had in
5 getting an F-1 license was that your experience
6 was tethered to a part-time backup water
7 treatment plant rather than a full-time water
8 treatment plant, correct?

9 A. Correct.

10 Q. If the decision was to be made on
11 whether you would get an F-1 license based upon
12 the criteria that was established at that time
13 applicable to people who work in full-time water
14 treatment plants, you would not have been able
15 to get the F-1 license, correct?

16 MR. MARKER: Objection; form and
17 foundation.

18 A. I will say there was -- from my
19 memory, it seemed like there was a question of
20 hours. So it was kind of like you earned time
21 to qualify for that license based on the number
22 of hours you were in a plant that was operating.

23 So I thought, to my understanding,
24 it was a question of how many hours I had, I

1 guess, been overseeing the operation of that
2 plant.

3 Q. Fair enough. We'll use hours
4 rather than experience.

5 Because the water treatment plant
6 was a backup, part-time water treatment plant,
7 you were not able to generate sufficient hours
8 operating the plant in order to qualify for an
9 F-1 license; is that right?

10 A. Correct. Yes.

11 Q. Okay. And so the Michigan
12 Department of Environmental Quality made an
13 exception in your case and allowed you to secure
14 the F-1 license despite that limitation on
15 hours; is that right?

16 MR. MARKER: Objection; form,
17 foundation.

18 Go ahead and answer, if you can.

19 A. I would say yes, there was a --
20 there was an issue with the number of hours,
21 because it took -- like I said, I started at the
22 water treatment plant in '05, late '05. It took
23 almost seven or eight years, I think, to get
24 that F-1 license, when if I would have worked in

1 a full-time plant, within a year or two, I would
2 have qualified --

3 Q. Sure.

4 A. -- if that makes sense.

5 Q. Sure. And I get it. The
6 difference was you were working in a part-time
7 backup plant as opposed to a full-time plant?

8 A. Correct.

9 Q. But in order to get the F-1
10 license, the State of Michigan, Department of
11 Environmental Quality, had to make an exception
12 in your case, correct?

13 A. Correct, yes.

14 Q. Okay. With respect to the water
15 treatment plant, can you describe its operation
16 between 2005 and 2015? Describe the nature of
17 its operation.

18 A. Yeah. The nature of the
19 operation --

20 Q. And let me change the dates.

21 A. Okay.

22 Q. From when you started in 2005 up
23 until April of 2014, can you describe the
24 operation for us?

1 A. I understand. Yep. The
2 operation -- like I said, we were a standby
3 plant, backup plant. We would run on a
4 quarterly basis and run for a week to two weeks
5 straight to test all the equipment, keep all the
6 operators up to speed on all the equipment, how
7 things operated. So, yeah, usually up to
8 roughly four times a year, we would run the
9 plant for a week to two weeks at a time.

10 Q. Okay.

11 A. And that was kind of the standard.
12 Every once in a while, we'd have a little longer
13 extended test run. And as we got closer to '14,
14 we had a few -- a few more extended test runs.

15 Q. I'll get to that.

16 Up until April of 2014, according
17 to your testimony on April 16, 2018 in the
18 criminal court, you had zero experience, that's
19 your words, zero experience in producing
20 drinking water from rivers; is that accurate?

21 MR. MORRISSEY: Object to form.

22 A. Other than our test runs that we
23 did, I would say that's accurate.

24 Q. In your test runs, you would take

1 water from the Flint River, correct?

2 A. Correct.

3 Q. You would run it through whatever
4 equipment you had at the water treatment plant
5 that was operable at the time, correct?

6 A. Correct, yes.

7 Q. And then you would discharge it
8 right back into the river, correct?

9 A. Correct. Yeah.

10 Q. So with respect to drinking water,
11 water that would be consumed by human beings, up
12 until April of 2014, you had zero experience in
13 producing drinking water to be consumed by human
14 beings through that plant, correct?

15 MR. MARKER: Objection to form.

16 MR. KIM: Object to form.

17 A. Actually, there was two occasions
18 prior to '14 where there was an issue on the
19 pipeline from Detroit that carried our drinking
20 water to the city to where there was two
21 different occasions. I believe one was in '09.
22 One might have been 2011. My dates could be
23 off. Don't hold me to them. But there was work
24 on the pipeline from Detroit to where we ran

1 water through that treatment plant and sent it
2 out to the city.

3 Q. Okay. So, actually, your
4 testimony at pages 167 and 168 of that volume of
5 your -- of the transcript -- again, that was
6 April 16, 2018.

7 Your testimony was that your
8 experience in producing water for consumers was
9 limited to two occasions for a day or two when
10 the Detroit Water & Sewer Department was having
11 issues; is that right?

12 A. That sounds correct, yes.

13 Q. And your experience totaled no
14 more than 48 to 72 hours over the course of ten
15 years; is that right?

16 A. That sounds ...

17 MR. MARKER: Objection to form.

18 Q. Okay. So I was a little bit
19 confused about the testimony, but maybe you can
20 expand upon it.

21 On those two occasions when you
22 distributed water from the water treatment plant
23 into the distribution system -- and by
24 "distribution system," I mean the pipes

1 throughout the city of Flint that ultimately led
2 to homes and businesses and allowed them to
3 consumer water, okay? That's what I mean by
4 "distribution system."

5 On those occasions, would you draw
6 down water first from the water treatment plant
7 reservoirs?

8 A. No.

9 Q. Did the water treatment plant have
10 reservoirs?

11 A. Yes.

12 Q. What was the purpose of the
13 reservoirs?

14 A. The purpose -- the main purpose
15 was storage.

16 Q. Storing what?

17 A. Storing finished water.

18 Q. Treated water?

19 A. Yep. To be delivered, yep.

20 Q. Okay. And prior to those
21 occasions, those two occasions in '09 or
22 thereabouts when the Detroit Water & Sewer
23 Department were having problems with their
24 pipes, so their system, the water that was in

1 the reservoirs was treated water from the city
2 of Detroit, correct?

3 A. Correct, yes.

4 Q. When would you use the water in
5 the reservoirs?

6 A. Oh, it depends. I mean, roughly
7 we'd like to turn over reservoirs every two to
8 four days. I mean, so the water was constantly
9 being used and refreshed.

10 Q. So I'm trying to get a sense of
11 what happened to the treated Detroit water in
12 the reservoirs on those two occasions when you
13 actually distributed water through the water
14 treatment plant to the citizens of Flint. What
15 happened to that reservoir?

16 A. Yep. We would slowly waste
17 through that reservoir until the time when we
18 needed to -- when we would get worried that we
19 were going to run out of water. So that's when
20 we would switch from our treatment plant to fill
21 the -- fill the reservoirs from treated river
22 water.

23 Q. Okay. So would the sequence of
24 events then be draw down of the reservoirs and

1 then replenish water in the reservoirs with
2 treated Flint River water?

3 MR. KIM: Objection as to form.

4 A. Yeah, along the usage. I mean, we
5 would try to use our storage somewhat -- I don't
6 know if I want to call it a scheduled draw down,
7 but you're going to use the water from your
8 reservoirs and your storage until the last
9 possible moment when you needed to add more
10 water.

11 Q. Okay. Should we conclude that at
12 least some portion of the drinking water that
13 was distributed on those two occasions to the
14 citizens of Flint came from the reservoirs?

15 A. Yes.

16 Q. We shouldn't -- we shouldn't
17 assume that all of the water came out of the
18 Flint River?

19 A. Right. Correct. Yeah.

20 Q. Was there any evaluation done
21 prior to those two occasions of what the
22 ramifications would be for the distribution
23 system for taking water out of the Flint River
24 and either passing it through the reservoirs or

1 directly into the distribution system?

2 A. Not to my knowledge.

3 Q. Okay. So it was just done?

4 A. Right.

5 Q. And was that done with the
6 knowledge of the DEQ?

7 A. Yes.

8 Q. Was it done with the approval of
9 the DEQ?

10 A. Yes.

11 Q. After that was done, was there any
12 evaluation of the impact that those two
13 occasions had on the distribution system, if
14 any?

15 A. Not that I'm aware of.

16 Q. Okay. So aside from those two
17 occasions and then after April of 2014, is it
18 true that you had no experience in treating
19 river water for human consumption over the
20 course of your lifetime?

21 MR. KUHL: Objection to form.

22 A. I would say that's a fair
23 statement.

24 Q. Okay. So can you describe your

1 relationship with the MDEQ?

2 A. Yeah. It was a working
3 relationship. It seemed to get most involved
4 after 2005 when I was on the drinking water
5 side.

6 Most of my interactions were with
7 our district engineer for the city, or that was
8 assigned to the city, which was Mr. Michael
9 Prysby. I felt we had a good working
10 relationship. He was -- he was always available
11 if I had questions or anything, and we had a
12 good rapport.

13 Most of the time yearly, he would
14 send me -- him and Mr. Rosenthal would send me
15 my yearly monitoring schedule to keep us on
16 track for what we needed to monitor in the
17 drinking water. And roughly I probably visited
18 with him three or four times a year.

19 Q. Okay. Mr. Prysby was with the
20 DEQ's Office of Drinking Water & Municipal
21 Assistance?

22 A. Correct. Yeah.

23 Q. And you've seen that acronym,
24 ODWMA?

1 A. Yes.

2 Q. What did you understand the Office
3 of Drinking Water & Municipal Assistance to be?

4 A. Well, in a sense they kind of had
5 a dual role as kind of a coach, but also kind of
6 the police in my eyes. You know, they were
7 there to guide us along but make sure we were
8 doing things correctly.

9 Q. Okay. The title of the office was
10 Office of Drinking Water & Municipal Assistance.
11 It wasn't office of drinking water and
12 manipulations and avoidance, was it?

13 MS. COLLINS: Objection; form.

14 A. No.

15 Q. Okay. Mr. Prysby was a
16 professional engineer; was he not?

17 A. Correct.

18 Q. You were not?

19 A. Correct.

20 Q. And you are not today?

21 A. Correct.

22 Q. You've met Mr. Busch?

23 A. Yes, I have.

24 Q. He was a professional engineer,

1 too?

2 A. Yes.

3 Q. Have you met Mr. Cook?

4 A. Yes.

5 Q. He's a professional engineer, too,
6 isn't he?

7 A. Correct. Yes.

8 Q. Have you met Ms. Shekter-Smith?

9 A. Yes, I have.

10 Q. She's a professional engineer,
11 too, isn't she?

12 A. Correct.

13 Q. And they were all at the time with
14 the Office of Drinking Water & Municipal
15 Assistance, correct?

16 A. Yes.

17 Q. Did you understand that as
18 professional engineers, they had a duty and
19 responsibility to the public at large to make
20 sure that they acted in a way to assure or to
21 help assure the public health of the citizens of
22 Michigan?

23 MS. COLLINS: Objection; form,
24 foundation.

1 A. Yes.

2 Q. And that's something you would
3 come to know over the course of your lifetime,
4 that professional engineers have this duty and
5 responsibility to the general public for safety,
6 correct?

7 MS. COLLINS: Objection; form.

8 A. Yes.

9 Q. And I don't mean to diminish your
10 knowledge and experience at all, Mr. Glasgow,
11 but when it came to your communications with
12 Prysby, Busch, Cook, and Shekter-Smith, the
13 Office of Drinking Water & Municipal Assistance,
14 they were the experts; were they not?

15 MS. COLLINS: Objection to form.

16 MR. KUHL: Object to form.

17 A. In my eyes, they were, yes.

18 Q. They were the people who knew or
19 should have known what the rules of the game
20 were?

21 MR. KUHL: Objection; form.

22 Q. Right?

23 A. Yes.

24 Q. They were the people that you and

1 the city of Flint would have relied upon in
2 order to deliver appropriate, truthful, and
3 accurate information about how you were supposed
4 to run the water treatment plant, correct?

5 MR. KUHL: Objection to form.

6 MR. MORRISSEY: Objection.

7 - - -

8 (Glasgow Deposition Exhibit 2 marked.)

9 - - -

10 BY MR. CAMPBELL:

11 Q. I'm giving you Exhibit 2, a
12 document I've marked as Exhibit 2. It's been
13 marked in Mr. Bincsik's deposition, if not other
14 depositions as well.

15 It's a memorandum by Mr. Bincsik
16 dated August 12, 2013. It's to Duffy Johnson.
17 And it relates to a water main on Pasadena.

18 Do you see that?

19 A. Yes.

20 Q. Who is Mr. Bincsik?

21 A. I believe at the time he was the
22 supervisor of our distribution system.

23 MR. KIM: Could you give us the
24 Bates number for that document.

1 MR. CAMPBELL: Yeah, I sure can,
2 Bill. It's city of Flint 0081618.

3 BY MR. CAMPBELL:

4 Q. So Mr. Bincsik back in August of
5 2013 was the person probably with the most
6 knowledge at the city of Flint about the
7 distribution system, correct?

8 A. Yes, I would have relied on him
9 for his information.

10 Q. You came to know Rob Bincsik as a
11 knowledgeable, hard working, intelligent
12 employee of the city of Flint, correct?

13 A. Yes, I would say that.

14 Q. And you would rely and did rely on
15 his information with respect to matters
16 pertaining to the distribution system?

17 A. Yes.

18 Q. So in this particular memorandum,
19 which is in August 2013, this would have come --
20 oh, I don't know -- six or seven months before
21 the switch over to the Flint River as the raw
22 water source for the city of Flint, correct?

23 A. Correct.

24 Q. And it would have come about a

1 month after a meeting among you, Mr. Wright,
 2 representatives of the MDEQ -- I believe LAN's
 3 Warren Green was present -- at the water
 4 treatment plant in July of 2013.

5 Do you remember that meeting?

6 A. Vaguely, yes. There's a few
 7 meetings, yep.

8 Q. I will show you the documents in a
 9 moment when we get to it.

10 But in 2013, in anticipation of a
 11 change in the raw water source from Detroit and
 12 Lake Huron to the Flint River, one of the things
 13 that occurred was a meeting at the water
 14 treatment plant by people who were involved in
 15 order to evaluate the water treatment plant for
 16 that role, correct?

17 A. Correct, yes.

18 Q. And, in fact, there was a -- there
 19 was a test run done of 30 days; is that right?

20 A. That is correct, yes.

21 Q. And that was done about July of
 22 2013, correct?

23 A. Yes.

24 Q. That test run was evaluating the

1 circumstances pertinent to the processes and
2 equipment within the water treatment plant,
3 correct?

4 A. Correct, yes.

5 Q. It was not evaluating the
6 implications of utilizing the Flint River as a
7 raw water source on Mr. Bincsik's distribution
8 system, was it?

9 A. No.

10 Q. Okay. That 30-day test run, was
11 that the longest test run that the water
12 treatment plant was ever put to prior to April
13 of 2014, to your knowledge?

14 A. Yeah. To my knowledge and my time
15 there, that was the longest.

16 Q. You came to know LAN and Rowe; did
17 you not?

18 A. Correct. Yes.

19 Q. And at LAN, the head guy, the lead
20 engineer, was Warren Green?

21 A. Yes.

22 Q. You came to know Warren Green?

23 A. Absolutely, yep.

24 Q. You came to respect him as an

1 engineer?

2 A. Yes.

3 Q. You came to trust his -- both his
4 knowledge and his advice and opinions?

5 A. Yes.

6 Q. Mr. Green advocated vehemently for
7 at least a 90-day run of the water treatment
8 plant before it was put in full operation,
9 didn't he?

10 A. Yes.

11 MS. COLLINS: Objection; form.

12 Q. Mr. Green advocated vehemently for
13 the utilization of corrosion control treatment,
14 and specifically orthophosphate, prior to
15 implementation of the water treatment plant as a
16 full-time facility?

17 MS. COLLINS: Objection to form.

18 (Reporter admonishment.)

19 MR. CAMPBELL: They don't like my
20 form.

21 MR. KIM: Objection as to
22 foundation.

23 BY MR. CAMPBELL:

24 Q. Do you have the question?

1 A. Yes, whether Warren Green was
2 stipulating the addition of corrosion control.
3 And that, I do not remember.

4 Q. Okay. You're clear that Mr. Green
5 wanted at least a 90-day operation of that plant
6 before it was put into full-time operation,
7 though?

8 A. Yes, yes, because I was in
9 agreeance with him. Yes.

10 Q. Okay. So you -- you were the only
11 F-1 licensed operator at the plant, right?

12 A. Correct. Yes.

13 Q. And while Mr. Wright may have been
14 your titular supervisor, you really were the
15 decision-maker at the plant at that time; isn't
16 that so?

17 MR. MARKER: Objection; form,
18 foundation.

19 A. Yeah. When it come to operation
20 of the treatment plant, I would say yes.

21 Q. Mr. Wright actually had to defer
22 to you on those issues; did he not?

23 A. Usually he would, yes.

24 Q. So you, as the F-1 licensed

1 operator, and Warren Green, the outside engineer
2 hired to use his knowledge and advice and give
3 advice, together you both wanted to run that
4 plant for at least 90 days?

5 A. Yes.

6 Q. What happened?

7 A. Well, usually, number one -- and
8 it's one of the things in some of my other
9 testimony -- we were always a standby plant. We
10 didn't have the staffing that we needed to.

11 I mean, to run that 30 day test
12 run in July or August of '13 there, I basically
13 had to institute all my employees to work
14 16-hour days for 30 days.

15 Q. Okay.

16 A. So and after that, that was about
17 all we could do, and, yes -- I stressed numerous
18 times that we needed more staff and we needed
19 them in there earlier if we were going to --

20 Q. To whom?

21 A. To my superiors, Mr. Johnson,
22 Mr. Croft.

23 Q. What was their response?

24 A. "We're working on it. We're

1 working on it."

2 Q. When did they actually work on it?

3 A. I don't remember getting any new
4 employees until about a month before the plant
5 went into operation.

6 Q. All right. Well, let's go back to
7 Bincsik's memorandum of middle of August 2013.

8 If you look at the second
9 paragraph, he reports, "Our underground
10 infrastructure in the city of Flint is terrible,
11 and any number of tragedies caused from its
12 failures are also lurking around the corner."

13 Did I read that correctly?

14 A. Yes.

15 Q. Do you remember getting a copy of
16 this or seeing a copy of this memo?

17 A. I don't recall seeing a copy, but
18 it was no -- it was no secret to me that the --
19 there's a lot of water main breaks every year,
20 talking with Mr. Bincsik, prior to any of this.
21 So I knew there was questions about the
22 distribution system.

23 Q. He goes on in that paragraph about
24 halfway down to complain about the city of

1 Flint's support sources.

2 Do you see that about halfway down
3 the same paragraph?

4 A. Yes.

5 Q. And his complaint is that he
6 really wanted the support services group at the
7 city of Flint actually to support him.

8 Do you see that?

9 A. Yes.

10 Q. Was that a problem at the time?

11 A. I could say yes.

12 Q. Okay. So by August of 2013 after
13 a 30-day test run of the plant, and in the
14 presence of known complaints from the head of
15 the distribution system about its terrible
16 condition and repetitive failures, what was done
17 in order to evaluate the likely impact of
18 utilizing raw Flint River water on Mr. Bincsik's
19 system?

20 MR. MARKER: Objection; form,
21 foundation.

22 A. I'm not aware of anything.

23 Q. Nothing was done?

24 A. Not that I'm aware of.

1 Q. We can agree with this, can we
2 not, Mr. Glasgow, that you knew and presumably
3 all of the persons with responsibility at the
4 city of Flint knew that the chemistry of the
5 Flint River would be markedly different from the
6 chemistry of lake -- treated Lake Huron water
7 from the city of Flint Detroit?

8 MS. COLLINS: Objection to form.

9 MR. KUHL: Objection to form,
10 foundation.

11 A. I said we knew there would be some
12 differences.

13 Q. What was done to evaluate those
14 differences on Mr. Bincsik's distribution
15 system --

16 MR. KIM: Objection as to form.

17 Q. -- before implementation of the
18 Flint River as a water source?

19 A. Yeah, nothing to my knowledge.

20 Q. Okay. So as you come up to April
21 of 2014, the city of Flint -- strike the
22 question.

23 To your knowledge, was the DEQ
24 aware of the decrepit condition of the city of

1 Flint's distribution system before April of
2 2014?

3 MR. MARKER: Objection; form.

4 MS. COLLINS: Objection; form and
5 foundation.

6 A. Yeah, I can't report on that. I
7 know that the city was required to do
8 reliability studies every so many years. So
9 that would contain information of main breaks
10 and issues.

11 Q. Okay.

12 A. So I would say they would have
13 some type of recording of it.

14 Q. Mr. Prysby and his group did
15 sanitary surveys; did they not?

16 A. Correct. Yes.

17 Q. And in the sanitary surveys, they
18 evaluated and reported on the condition of the
19 distribution system; didn't they?

20 MS. COLLINS: Objection; form,
21 foundation.

22 A. As far as I know, yes.

23 Q. Do you remember that in the 2013
24 sanitary survey, Mr. Prysby as the author of

1 that survey reported that the distribution
2 system was in terrible shape?

3 MS. COLLINS: Objection; form.

4 A. I don't know that I ever truly
5 read that.

6 Q. Okay.

7 A. I would have a separate sanitary
8 survey for my water treatment plant. So that's
9 the one I would be more familiar with.

10 Q. Oh, I see. There would be a
11 sanitary survey for the water treatment plant
12 and a sanitary survey for the distribution
13 system?

14 A. Correct. Yes. So sometimes when
15 they're talking distribution system, I wouldn't
16 always be privy to that.

17 Q. By the way, I used the term a
18 little while ago "the Flint water crisis."
19 You've heard that term many, many times?

20 A. Yes, many, many times.

21 Q. What was the Flint water crisis?

22 MR. MARKER: Objection; form.

23 A. Yeah, in my opinion, a series of
24 mistakes in a short amount of time. I think the

1 crisis was a rush to put the treatment plant in
2 operation.

3 Q. Well, you maybe not predicted the
4 problem, but you raised an alarm about rushing
5 the water treatment plant into operation in
6 April of 2014 before the trigger was actually
7 pulled, correct?

8 A. Correct.

9 MS. COLLINS: Objection; form.

10 MR. KUHL: Objection, form.

11 Q. Ultimately wasn't the Flint water
12 treatment crisis one that was intimately
13 involved with the distribution system?

14 MR. KIM: Objection as to form.

15 A. Yes.

16 Q. There were many, many questions
17 presented to you in the transcripts that now are
18 marked as Exhibit 1 here about the water that
19 was being treated at the water treatment plant
20 and how it was evaluated.

21 Do you remember those questions?

22 A. Vaguely.

23 Q. Okay. So I don't mean to be
24 obtuse about it. But you were asked -- and I

1 think you testified that the water at the
2 treatment plant before distribution met all of
3 the criteria set by the Safe Water Drinking Act?

4 A. Yes.

5 Q. So the Flint water crisis was
6 really one that related to the passing of that
7 treated water into Mr. Bincsik's distribution
8 system, correct?

9 MR. KIM: Objection to form and
10 foundation.

11 MR. MARKER: Objection.

12 A. I could agree with that, yes.

13 Q. And the problem there was the
14 water now treated Flint water reacted -- my
15 term -- reacted with Mr. Bincsik's distribution
16 system in an adverse way, correct?

17 MR. KUHL: Objection to form.

18 A. Yes.

19 Q. And one of the adverse ways that
20 it reacted was in leaching of lead from lead
21 service lines, correct?

22 MR. KUHL: Objection; form.

23 A. Yep, that was one of the ways.

24 Q. Prior to April of 2014, what was

1 done by the city of Flint or by the MDEQ, the
2 experts, in order to evaluate the impact that
3 the Flint River water after treatment would have
4 on the distribution system with respect to
5 leaching of lead from the service lines?

6 MS. COLLINS: Objection to form,
7 foundation.

8 MR. KUHL: Objection to form.

9 A. Yeah, I'm not aware of anything.

10 Q. Nothing? Zero? Zip-a-Dee-Doo-Dah
11 was done, right?

12 MR. KUHL: Objection to form.

13 MR. KIM: Objection to form.

14 A. I'm not aware of anything.

15 MR. CAMPBELL: What's wrong with a
16 little color.

17 - - -

18 (Glasgow Deposition Exhibit 3 marked.)

19 - - -

20 BY MR. CAMPBELL:

21 Q. You have before you now Exhibit 3.

22 MR. MARKER: Hold on, counsel. I
23 think he needs to read it, if you don't
24 mind.

1 MR. CAMPBELL: No, I don't mind at
2 all. Take your time.

3 MS. COLLINS: Could we get the
4 Bates number?

5 MR. MORRISSEY: Did you all bring
6 copies of any exhibits?

7 MR. CAMPBELL: No.

8 MR. MORRISSEY: We've done the
9 courtesy of that for the depositions
10 we've taken. And if you don't want us
11 to do that anymore -- because your
12 colleagues appreciated that. So if
13 you'd like us not to do that anymore,
14 fine.

15 MR. CAMPBELL: Well, you have to
16 understand who I am, okay?

17 MR. MORRISSEY: I understand who
18 you are.

19 MR. CAMPBELL: I'm a retired
20 lawyer that's been brought in here to
21 take a deposition. I have zero to do
22 with the day-to-day operation of this
23 litigation.

24 So if you have a problem with the

1 way my colleagues at the Campbell law
2 firm operate, take it up with them.
3 Don't take it up with me, because I
4 don't work for them. I'm not employed
5 by that law firm.

6 MR. MORRISSEY: I don't have any
7 problem with how your colleagues have
8 handled the depositions that we provided
9 a courtesy -- where we provide the
10 courtesy of giving them copies of
11 exhibits. That's not my problem. My
12 problem is that you and your colleagues
13 didn't bring copies today.

14 MS. DEVINE: We're not required
15 to. We disclosed the exhibits.

16 MR. CAMPBELL: I thought the whole
17 idea --

18 MR. MORRISSEY: Fine. If you
19 don't want me to bring a copy going
20 forward, we won't.

21 MR. CAMPBELL: I thought the whole
22 idea of disclosing the documents by
23 Bates number was so that everybody could
24 get them and have them handy. I thought

1 that was the rule.

2 But take it up with Alaina and Jim
3 Campbell. Don't take it up with me.

4 BY MR. CAMPBELL:

5 Q. Have you had a chance yet,
6 Mr. Glasgow, to take a look at this?

7 MS. COLLINS: I apologize. The
8 Bates number?

9 MR. CAMPBELL: Yeah. I'm sorry.
10 It's 24966. It's a State of Michigan
11 0024966.

12 MS. COLLINS: Thank you.

13 BY MR. CAMPBELL:

14 Q. If you turn to page 2 of that
15 document.

16 A. That's where I'm at.

17 Q. Do you remember being asked
18 questions about this at the -- in the criminal
19 court by Mr. Flood?

20 A. I do not recall, but I was asked a
21 lot of questions, so I apologize.

22 Q. Yes, you were, over multiple days.
23 So in paragraph 4, Mr. Busch in an
24 e-mail dated March 26, 2013 states, "The

1 continuous use of the Flint River at such demand
2 rates would pose an increased microbial risk to
3 public health (Flint River vs. Lake Huron source
4 water)."

5 Do you see that?

6 A. Yes.

7 Q. Do you agree with that?

8 A. Yes.

9 Q. The second point was, "Pose an
10 increased risk of disinfection byproduct, a
11 (carcinogen) exposure to public health (Flint
12 River vs. Lake Huron source water)."

13 Did I read that correctly?

14 A. Yes.

15 Q. You agree with that, too?

16 A. Yes.

17 Q. Point 3, "Trigger additional
18 regulatory requirements under the Michigan Safe
19 Drinking Water Act."

20 Do you see that?

21 A. Yes.

22 Q. You agree with that, too?

23 A. Yes.

24 Q. Point 4, "Require significant

1 enhancements to treatment at the water treatment
2 plant beyond those identified in the TYJT
3 report."

4 Do you see that?

5 A. Yes.

6 Q. Do you know what that report is?

7 A. Vaguely. The Tucker Young I think
8 was a consultant that the city had hired.

9 Q. Right. If you look on the prior
10 page, you'll see it identified as Tucker, Young,
11 Jackson & Tull.

12 A. Yes.

13 Q. Did you review that report?

14 A. I don't recall reviewing that
15 report.

16 Q. Can you tell me what was done
17 prior to April of 2014 in order to address the
18 increased microbial risk to public health by
19 switching to the Flint River?

20 A. Other than -- yeah, the only thing
21 I recall in regards to that would be an issue
22 with our ozone generator equipment at the city
23 of Flint treatment plant.

24 Q. The ozone treatment equipment was

1 not actually operating in April of 2014, was it?

2 A. It was operating.

3 Q. It was not operating properly, was
4 it?

5 A. Not operating up to par, I'll say,
6 yeah.

7 Q. What was done by the city of Flint
8 to address the increased risk of disinfection
9 byproducts, a carcinogen, with respect to public
10 health? What was done?

11 MR. KUHL: Objection to form.

12 Do you have a time frame, Dick?

13 A. I will say -- I'll refer that to
14 the same. The ozone generation equipment was
15 supposed to break up the precursors to
16 disinfection byproducts.

17 So until we kind of upgraded
18 that -- or not upgraded, repaired some of the
19 issues of it, I'll say nothing was done.

20 Q. The third item references
21 additional regulatory requirements under the
22 Safe Drinking Water Act.

23 What was done -- what were those
24 additional requirements?

1 MR. MARKER: Objection; form,
2 foundation.

3 Q. Do you know what he's referencing?

4 A. Well, in parentheses there, it's
5 the LT2. It's the long-term enhanced surface
6 water treatment rule. There was a number of
7 things, I guess, that would fall under that for
8 regulatory requirements. I can't state them all
9 to you here, but ...

10 Q. What was done to comply with those
11 requirements?

12 A. Nothing that I'm aware of.

13 Q. And point D, he references
14 "Significant enhancements to treatment at the
15 water treatment plant beyond those identified in
16 the TYJT report."

17 What was done to comply with that?

18 A. Well, there was significant
19 enhancements. I know design, we had changed out
20 our switch gear, all our electrical switch gear.
21 There were some piping configurations
22 underground that were updated.

23 We had -- I know there was some
24 corrections to be made to our softening

1 clarifiers in the treatment process.

2 And these were all ongoing. I
3 can't -- without looking at other data, I
4 couldn't tell you when it was completed or when
5 it was started.

6 MR. CAMPBELL: Let's mark this as
7 the next exhibit.

8 - - -

9 (Glasgow Deposition Exhibit 4 marked.)

10 - - -

11 BY MR. CAMPBELL:

12 Q. So I've given you Exhibit 4, and
13 I've made mention of it earlier. This is a memo
14 by Brent Wright. You are listed as a recipient
15 along with a bunch of other people, including
16 Mr. Busch, Mr. Prysby, Jeff Hansen, Warren
17 Green, Samir Matta. Those three are all with
18 LAN, correct?

19 A. Correct. Yep.

20 MR. KIM: Richard, what's the
21 Bates number?

22 MR. CAMPBELL: Sure. It's city of
23 Flint 0244662. That's the cover letter.
24 The next three documents have a

1 different Bates number, an LAN Bates
2 number, 00036 -- I'm sorry. 0003651,
3 352, 353.

4 BY MR. CAMPBELL:

5 Q. Have you had a chance to look at
6 that?

7 A. Yes.

8 Q. Okay. I gather this is sort of a
9 notice of a meeting to take place on June 26,
10 2013 at the water treatment plant. And then
11 there's a sign-in sheet that shows people who
12 signed in on June 26, 2013, correct?

13 A. Correct, yes.

14 Q. And among the people who signed in
15 were the three individuals from -- well, maybe
16 not. Maybe two individuals from LAN, and it
17 looks like at least three individuals from the
18 Department of Environmental Quality, including
19 Busch, Prysby, and somebody by the name of
20 Bloemker. Do you know him?

21 A. Yeah.

22 Q. Who is he?

23 A. Jon Bloemker. Yeah, he was just a
24 field operations guy. I think operations

1 specialist, so to speak. It seemed like he had
2 been with the DEQ for a significant amount of
3 time.

4 Q. Okay. So at this meeting, this is
5 when the discussion and decision was made to run
6 the plant for 30 days?

7 A. Sounds right, yeah, because that
8 would have happened in July.

9 Q. Tell us about the discussion.
10 What was said?

11 A. Oh, I'd have to dust off some
12 cobwebs to try to remember this. I don't know
13 that I can really -- I'm trying to read notes to
14 see if it will stimulate anything here, but --

15 Q. Well, if you take a look at the
16 last page of handwritten notes on the LAN
17 document. This one is Bates number 00036353.

18 Do you see that? It's the last
19 page. Very short.

20 A. Yep.

21 Q. Okay. The next to last line, the
22 penultimate line makes reference to lead and
23 copper.

24 Do you see that?

1 A. Yes.

2 Q. So lead and copper was discussed
3 at this meeting; was it not?

4 A. Must have been with the notes
5 there. I do not personally recall.

6 - - -

7 (Glasgow Deposition Exhibit 5 marked.)

8 - - -

9 MS. DEVINE: LAN_USAO_00035359
10 marked at the Busch deposition.

11 MR. SCHNATZ: What number are we
12 giving that here?

13 MR. CAMPBELL: I think City of
14 Flint. It's 5.

15 BY MR. CAMPBELL:

16 Q. Take a moment and look at that.
17 Have you had a chance to look at
18 it?

19 A. Yes.

20 Q. Okay. This is an official policy
21 of the Office of Drinking Water & Municipal
22 Assistance related to the Lead and Copper Rule,
23 correct?

24 A. Correct, yes.

1 Q. It's dated -- it has two dates, an
2 original date of August 4, 2003 and a
3 reformatted date of January 17, 2013.

4 Do you see that?

5 A. Yes.

6 Q. So first question: When you sat
7 with people at the June 26, 2013 meeting at the
8 water treatment plant, including the three
9 representatives from the DEQ, was this policy
10 put down in front of you and discussed with you?

11 A. Not that I recall, no.

12 Q. Prior to April of 2014, did you
13 have this policy?

14 MR. MARKER: Objection to form.

15 A. Not that I recall having this
16 policy.

17 Q. Do you remember at the June 26,
18 2013 meeting at the water treatment plant the
19 representatives of the Michigan Department of
20 Environmental Quality explaining the details of
21 the policy even if they didn't put it down in
22 front of you?

23 A. I cannot recall.

24 Q. Is this the first time you've seen

1 this policy?

2 A. In paper format, yes. This is the
3 first time it's been in front of me like this.

4 Q. Okay. If you look right on the
5 first page of the policy under the heading
6 "Introduction, Purpose, or Issue," the policy
7 references -- or states that "The Lead and
8 Copper Rule of the National Primary Drinking
9 Water Regulations was promulgated by the United
10 States Environmental Protection Agency under the
11 Federal Safe Drinking Water Act."

12 Do you see that?

13 A. Yes.

14 Q. Did you understand that the
15 Michigan Department of Environmental Quality was
16 the primary agency, meaning it had the first
17 line responsibility for enforcing federal law
18 under the Safe Drinking Water Act?

19 A. Yes.

20 Q. You understood that the ultimate
21 arbitor was the EPA on the Safe Drinking Water
22 Act, right?

23 A. Yes.

24 Q. That the Michigan Drinking Water

1 Act could impose greater standards, but couldn't
2 undercut the federal act?

3 A. Correct.

4 Q. You understood that?

5 A. Yes.

6 Q. All right. After reference to the
7 Safe Drinking Water Act, the policy has these
8 two sentences: "The complexity of the rule
9 necessitates guidance to maintain consistent
10 implementation of the rule by field staff.
11 Field staff includes the Department of
12 Environmental Quality, public water supply
13 staff, and local health department staff."

14 Did I read that correctly?

15 A. Yes.

16 Q. Was the local health department
17 brought into the consideration of the change
18 from Lake Huron and Detroit Water & Sewer
19 Department water to the Flint River water in
20 order to evaluate the health risks that would be
21 presented by that change?

22 A. Not that I was aware of.

23 Q. And this makes reference -- this
24 uses the terminology "local health department."

1 There's also the Genesee County Health
2 Department; isn't that right, Mr. Henry?

3 A. Correct.

4 Q. Do you know whether Mr. Henry was
5 brought into a consideration of the health
6 impacts for Genesee County of a switch to the
7 Flint River as the raw water source?

8 A. I don't know when he was brought
9 in. I know the first time I met him would have
10 been in August or September of '14 after the
11 switch had already taken place.

12 Q. Did you understand that the city
13 of Flint water treatment plant was considered a
14 large system under the federal law?

15 A. Yes.

16 Q. Because it supplied water to more
17 than 50,000 residents?

18 A. Yes.

19 Q. If you look at page 6, there's a
20 heading marked "Corrosion Control."

21 Do you see that?

22 A. Getting there. Yes.

23 Q. And if you look at subpart C, it's
24 headed "Change in Treatment or Addition of a New

1 Source."

2 A. Yes.

3 Q. Do you see that?

4 A. Yes.

5 Q. And back in June of 2013 --

6 actually, before June of 2013, the city of

7 Flint, the DEQ, Genesee County, were all talking

8 about changes in water source, correct?

9 A. Correct.

10 Q. That was going on for some time --

11 A. Yes.

12 Q. -- correct?

13 A. Yes.

14 Q. In 2013 when you had this meeting

15 at the water treatment plant and discussed the

16 30-day test run, that test run and that meeting

17 was conducted because a change in water source

18 was envisioned, correct?

19 A. Yeah. I guess I looked at it as

20 we were going into operations, so ...

21 Q. But you were going into an

22 operation with a new raw water source?

23 A. With a new water source, yes.

24 Q. If you look down at the bottom of

1 that subparagraph C it says -- it reads, "If the
2 water quality and characteristics of the new
3 source are similar to the supply's existing
4 sources, then field staff may consider the new
5 source as not adversely affecting the supply of
6 corrosion control treatment and no further
7 action is needed."

8 Do you see that?

9 A. I do, yes.

10 Q. Who made the evaluation that the
11 new source, the Flint River, had similar
12 characteristics to Lake Huron water being
13 treated by the Detroit Water & Sewer Department?

14 MS. COLLINS: Objection;
15 foundation.

16 MR. MARKER: Objection; form and
17 foundation.

18 Q. Who made that determinations?

19 A. I'm not sure who made that
20 determination.

21 Q. The truth is nobody made that
22 determination, right?

23 MR. KIM: Objection.

24 A. Like I said, I'm not sure who made

1 that decision or who determined that.

2 Q. You understood that as a large
3 system delivering drinking water to more than
4 50,000 residents, the city of Flint had an
5 obligation to have optimal corrosion control
6 treatment, right?

7 MR. KUHL: Objection to form.

8 A. According to the Safe Drinking
9 Water Act, yes, when you read that.

10 Q. Okay. And I will get to this as
11 we move along here at a glacial pace.

12 The truth is, that on day one in
13 April of 2014, and not until October, maybe
14 November, of 2015, there was no corrosion
15 control treatment utilized at the plant, right?

16 A. Correct.

17 MS. COLLINS: Objection to form.

18 Q. Who made the decision as to
19 whether or not there would be no optimized
20 corrosion control treatment as required by
21 federal law? Who made decision?

22 MR. KUHL: Objection as to form.

23 MR. KIM: Objection as to
24 foundation.

1 A. I recall the meeting with myself,
2 Mr. Prysby, and maybe one or two other
3 gentlemen. Like I say, all these meetings kind
4 of blend together. But I remember Mr. Prysby
5 telling us that we didn't need to add any
6 corrosion control, that they were going to wait
7 and do two six-months' rounds of monitoring
8 before it would be decided.

9 Q. Okay.

10 A. And it wasn't a specific question.
11 I asked him in regards to some of the testing
12 that my lab was going to have to perform, and I
13 was inquiring about phosphate, if we needed to
14 test for phosphate. And that's when I was told,
15 "No, because you won't be adding any phosphate."

16 Q. I'm glad you brought that up.
17 Prior to April of 2014, you knew
18 what orthophosphate was, correct?

19 A. Correct, yes.

20 Q. You knew what polyphosphate was;
21 did you not?

22 A. Correct. Yes.

23 Q. Did you know the water treatment
24 plant before 1967 had been run utilizing Flint

1 River as a raw water source for drinking water
2 in the city of Flint? Did you know that?

3 A. Yes, I did know that.

4 Q. Did you know that the Flint water
5 treatment plant utilized a polyphosphate for
6 corrosion control treatment prior to 1967?

7 A. To be honest, I wasn't aware of
8 that, no.

9 Q. Did you or did anybody, to your
10 knowledge, at DEQ evaluate the means and methods
11 by which the water treatment plant actually
12 engaged in corrosion control treatment back when
13 it was running full time prior to 1967?

14 A. Not --

15 MR. MARKER: Objection to form.

16 A. Not that I'm aware of.

17 Q. Did you come to learn that Warren
18 Green of LAN objected to the city and to DEQ
19 about the failure to use corrosion control
20 treatment?

21 MR. SCHNATZ: Object to form.

22 A. No.

23 Q. Did you learn that Mr. Green
24 explicitly told your boss, Duffy Johnson, that

1 that was a mistake?

2 MR. SCHNATZ: Object.

3 MR. MORRISSEY: Object to form.

4 A. I'm not aware of that, no.

5 MR. CAMPBELL: The next Exhibit
6 city of Flint 0202655 and beyond.

7 - - -

8 (Glasgow Deposition Exhibit 6 marked.)

9 - - -

10 BY MR. CAMPBELL:

11 Q. So this Exhibit 6 is addressed
12 from Warren Green to Brent Wright.

13 Do you see that? It's dated
14 August 20, 2013.

15 A. Yes.

16 Q. Do you know whether you received
17 this document, whether you reviewed it?

18 A. I do not recall.

19 MR. MARKER: Before you ask any
20 questions -- or any further questions,
21 can you allow him a moment to review it?

22 MR. CAMPBELL: Yeah, sure.

23 MR. KIM: Richard, what's the
24 Bates number?

1 MR. CAMPBELL: I thought I said
2 it, but it's -- I'll say it again. The
3 first page is 020655, and then it's --
4 it's a multi-page document.

5 BY MR. CAMPBELL:

6 Q. Have you had a chance to now look
7 at it?

8 A. Yes.

9 Q. I understand it's a multi-page
10 document. I'll try to move through it quickly.

11 This is a document that attaches
12 to it a proposed scope of work for LAN with
13 respect to upgrades to the water treatment
14 plant, correct?

15 A. Correct, yes.

16 Q. So in the regular course of
17 business, you would have seen this, right?

18 A. Yes. I would have at one time,
19 yep.

20 Q. On the first page under "Proposed
21 Scope of Upgrades to water treatment plant" in
22 the introduction, after referencing the
23 utilization of the water treatment plant, "until
24 construction of the proposed KWA supply is

1 complete."

2 Do you see that in the first
3 sentence?

4 A. Yes.

5 Q. Is that -- by the way, is that
6 your understanding of what the plan was at that
7 time?

8 A. Yes. That is what had been talked
9 about, yeah.

10 Q. This is sort of a placeholder
11 until KWA was up and running?

12 A. Yeah. Kind of buy us some time,
13 yep.

14 Q. All right. And then if you follow
15 down that same paragraph, the LAN document
16 reads, "In addition to the different treatment
17 requirements of each source" --

18 Did I read that correctly?

19 A. Yes.

20 Q. -- "the water treatment plant has
21 not been operated on a continuous basis for
22 40-plus years. So facilities are also being
23 evaluated to identify equipment which should be
24 replaced because of its age, condition, or

1 obsolescence."

2 Did I read that correctly?

3 A. Yes.

4 Q. What were the different treatment
5 requirements of each source that's referenced
6 there; do you know?

7 A. Well, it's different. I mean,
8 Lake Huron water is fairly clean water compared
9 to river water. The river water is a lot
10 harder. So there are some differences. It was
11 a little more difficult to treat the river water
12 than it was the Lake Huron water.

13 Q. The TOC in river water would have
14 been substantially higher, right?

15 A. Correct. Yes.

16 Q. And what does TOC stand for?

17 A. Yeah. Total organic carbon, kind
18 of the precursor to our disinfection byproducts.

19 Q. Okay. Total organic carbon became
20 a treatment issue and a problem at the water
21 treatment plant, didn't it?

22 A. It did, yes.

23 Q. If you go to page -- the last page
24 under item 3. It's headed "Other Items to

1 Address to Finalize Scope of Work."

2 A. Yes.

3 Q. Do you see that?

4 A. Yes.

5 Q. Subpart C reads, "Impacts of using
6 river as continuous supply (quantity, quality
7 monitoring and control reservoir operating
8 levels)."

9 Do you see that?

10 A. Yes.

11 Q. So Warren Green and LAN were in
12 the scope of work were identifying as a matter
13 for future discussion and incorporation into the
14 scope of work the impact of using the Flint
15 River as a raw water source on the system?

16 MR. SCHNATZ: Object to form.

17 A. Yes.

18 Q. Was that ever done?

19 A. Not that I recall.

20 MR. CAMPBELL: Let me hand you
21 this next exhibit.

22 MS. DEVINE: City of
23 Flint_FED_0114742.

24 MR. KIM: Say that again.

1 MS. DEVINE: Yep. City of
2 Flint_FED_0114742.

3 - - -

4 (Glasgow Deposition Exhibit 7 marked.)

5 - - -

6 BY MR. CAMPBELL:

7 Q. Let me know when you're ready.

8 A. Yeah. Whenever -- I'm good.

9 Q. Okay. Sorry.

10 This is an e-mail string between
11 you and Duffy Johnson in October of 2013,
12 correct?

13 A. Correct, yes.

14 Q. And the subject matter of this
15 exchange is the impact of the Flint River on the
16 distribution system, correct?

17 A. Correct, yes.

18 Q. And one of the things that came up
19 was softening, what was going to be done about
20 softening, right?

21 A. Right.

22 Q. All right. But in the initial
23 e-mail responding to Mr. Johnson's inquiry to
24 you about the impact of the treated Flint water

1 on the distribution system, you say, "I have
2 heard different arguments."

3 Do you see that?

4 A. Uh-huh, yes.

5 Q. From whom?

6 A. Oh, that would be from people in
7 the field, things I've read.

8 Q. Warren Green?

9 A. He's probably -- yeah, he would be
10 included in that, yes.

11 Q. Okay. You go on to say that --
12 you make reference to the final water quality.

13 Do you see that?

14 A. Yes.

15 Q. Referencing pH and alkalinity?

16 A. Yes.

17 Q. And then you say, "Most likely we
18 will have scale-forming water."

19 Do you see that?

20 A. Yes.

21 Q. I have searched long and hard to
22 find any memorandum demonstrating calculations
23 or the like supporting that statement.

24 Can you tell us how you derive the

1 conclusion or observation that the water would
2 be scale forming?

3 A. Oh, that was based on -- at the
4 time it was kind of the industry standard. It
5 was called the Langelier index.

6 Q. Okay.

7 A. It was an index of a number of
8 different parameters to kind of determine, yeah,
9 how -- somewhat the corrosiveness of the water,
10 whether you'll form a calcium scale or whether
11 you're going to be in aggressive water that rips
12 scale off.

13 Q. So you're referencing the
14 Langelier index?

15 A. Yes.

16 Q. I haven't found any calculation,
17 written calculation, by you related to the
18 Langelier index.

19 Would you have done a calculation,
20 or was this a seat-of-the-pants judgment?

21 MR. MARKER: Objection to the form
22 of the question.

23 A. Well, this is -- I'll say this is
24 prior to the running, so I -- I understood the

1 Langelier index, but I wouldn't necessarily be
2 calculating anything here. That was more in
3 terms of when we were actually operating the
4 plant and softening the water.

5 Q. Okay. So that begs the question
6 of how did you derive the observation that the
7 water would most likely be scale forming? How
8 did you get there without calculating?

9 A. That's a good question.

10 Q. That's why I asked it.

11 A. Most likely, it had to be I
12 probably looked at previous test runs. I must
13 have done a calculation, whether it was
14 scribbled on a notepad or whatnot. But we know
15 what final water characteristics we were kind of
16 wanting. And we would look at pH, alkalinity,
17 hardness, and all those parameters under -- that
18 are utilized in the Langelier index. That was
19 kind of my assumption. You'd shoot for a
20 positive Langelier which would be a scale
21 forming.

22 Q. Okay. So that comment begs this
23 question: A Langelier datum that has a plus
24 sign in front of it indicates one thing, and a

1 Langelier index that has a negative sign in
2 front of it means something else, correct?

3 A. Correct, yes.

4 Q. If it has a negative sign in front
5 of the number, that suggests that the water is
6 corrosive?

7 A. Correct. Yes.

8 Q. If it has a positive symbol in
9 front of it, that suggests the opposite?

10 A. Right. Scale forming, yeah.

11 Q. Okay. In the fall -- I think it's
12 September or October of 2015 -- Marc Edwards
13 from Virginia Tech came onto the scene and
14 communicated with you on a number of occasions,
15 correct?

16 A. I only communicated with him once
17 or twice via e-mail.

18 MR. CAMPBELL: Okay. Could you
19 pass the next exhibit on to the witness,
20 please.

21 MS. DEVINE: This is

22 LAN_GCPO_00026370.

23 - - -

24 (Glasgow Deposition Exhibit 8 marked.)

1 - - -

2 BY MR. CAMPBELL:

3 Q. So Exhibit 8 is styled
4 "Synergistic impacts of Corrosive Water and
5 Interrupted Corrosion Control on
6 Chemical/Microbiological Water Quality: The
7 Flint, Michigan Water Crisis."

8 Did I read that correctly?

9 A. Yes.

10 Q. Do you recognize this as a
11 PowerPoint from Marc Edwards?

12 A. Yes.

13 Q. You've seen this before, haven't
14 you?

15 A. Yeah. Yes, I have.

16 Q. If you go to the second page, flip
17 side -- yeah, that one with the chart on it.

18 It reads off to the side -- on the
19 sidebar, it says, "Flint water is very
20 corrosive. Detroit water is not."

21 Do you see that?

22 A. Yes. Yep.

23 Q. And then in the table, Table 1,
24 Professor Edwards and his crew put together a

1 set of data in three columns; the parameter,
2 before, and after, referencing before and after
3 the April 2014 switch.

4 Do you see that?

5 A. Yes.

6 Q. And if you look down, the
7 parameters include pH, hardness, alkalinity,
8 chloride, sulfate, CSMR. That's the -- what is
9 it? Chloride sulfate mass ratio? Is that what
10 that stands for?

11 A. Yes, I believe so.

12 Q. Inhibiter and Larson ratio.

13 Do you see that?

14 A. Yes.

15 Q. And looking at the before and
16 after on the hardness, that was significantly
17 higher than it was before the switch, correct?

18 A. Correct, yes.

19 Q. And the chloride content was
20 significantly greater; was it not?

21 A. Yes.

22 Q. The sulfate was higher; was it
23 not?

24 A. Yes.

1 Q. The CSMR comparison is sort of 3
2 to 1?

3 A. Yes. Roughly, yep.

4 Q. And then he has inhibitor. You
5 take that to mean a corrosion control chemical?

6 A. Yes.

7 Q. And he lists it as inhibitor,
8 milligrams per liter as P. Is that for
9 phosphate?

10 A. Yes.

11 Q. Is that how you would read it?

12 A. Yeah. P, that's probably
13 phosphorus in that.

14 Q. And then he -- Virginia Tech
15 records before the inhibitor was a
16 0.35 milligrams per liter. And then in caps
17 after it, "None," correct?

18 A. Correct.

19 Q. And that's true? You agree with
20 that, right?

21 A. Yes. Yep.

22 Q. And then he records the Larson
23 ratio. And the after -- the Larson ratio for
24 the after -- after the switch was four times

1 greater than before. More than four times
2 greater, right?

3 A. Yes.

4 Q. So does this data add up to what
5 he says in your view that the water -- the Flint
6 River water was very corrosive and Detroit was
7 not?

8 MR. KUHL: Objection to form and
9 foundation.

10 MR. MARKER: I'll join.

11 A. Yeah. I'm going to say he was
12 considered an expert in his field, so I would
13 follow what he said.

14 Q. You don't disagree with it?

15 A. Right. Correct. Yep.

16 - - -

17 (Glasgow Deposition Exhibit 9 marked.)

18 - - -

19 MS. DEVINE: This is VWNAOS028028.

20 MR. KUHL: Alaina, what is the
21 exhibit number for that?

22 MS. DEVINE: 9.

23 BY MR. CAMPBELL:

24 Q. Let me know when you're ready.

1 A. Yep. Whenever you're ready.

2 Q. Okay. I don't know that you've
3 ever seen this document. It's a set of
4 handwritten notes by Marvin Gnagy of Veolia
5 North America, my client?

6 A. Okay.

7 Q. Do you know Mr. Gnagy?

8 A. I remember a couple gentlemen from
9 Veolia around there. I couldn't tell you a
10 name.

11 Q. They were on the scene for, what,
12 about 30 days?

13 A. Yeah, for a little while. I know
14 they were in my lab doing some testing.

15 Q. Okay. If you look -- if you look
16 at this document, the second set of data, he has
17 CCPP, LI, and I think it's D-I-C, but I could be
18 wrong on the reading of that.

19 The LI, Langelier index?

20 A. Yes.

21 Q. Do you see where it is listed with
22 negative numbers?

23 MR. MARKER: I'm going to object
24 to the form and foundation. I don't

1 know that he has seen this document
2 before --

3 MR. CAMPBELL: I just asked him.

4 MR. MARKER: -- and whether or not
5 he has seen the calculations or was
6 involved in the calculations. So just
7 form and foundation on that basis.

8 MR. CAMPBELL: Sure.

9 BY MR. CAMPBELL:

10 Q. Do you see the negative number?

11 A. Yes.

12 Q. The negative number indicates
13 corrosive water, correct?

14 A. Correct, yes.

15 Q. And in the note below, Mr. Gnagy
16 states that corrosive water conditions exist and
17 he discussed it with the plant staff, and he
18 also discussed lead and copper issues.

19 Do you see that?

20 A. Yes.

21 Q. Mr. Bincsik actually wrote a
22 memorandum on February 24 -- and I'll get to
23 it -- February 24, 2015, where he actually
24 records that Marvin of Veolia made reference to

1 possible lead issues in the water.

2 Do you remember that?

3 MR. MORRISSEY: Object to form.

4 MR. MARKER: I'll join.

5 A. I don't recall that. I'm sorry.

6 - - -

7 (Glasgow Deposition Exhibit 10 marked.)

8 - - -

9 MR. CAMPBELL: The Bates number on
10 this is CROFT -- it looks like
11 0000000125 and 126.

12 BY MR. CAMPBELL:

13 Q. All set?

14 A. Yep.

15 Q. I bring this out of sequence only
16 because of the question that I just asked you
17 about Mr. Bincsik referencing the comments by
18 Mr. Gnagy, Marvin, of Veolia in an e-mail.

19 Do you see that now in front of
20 you?

21 A. Yes, I do.

22 Q. Do you remember that e-mail now?

23 A. Yes, vaguely.

24 Q. So on February 24, 2015 at

1 2:19 p.m. Mr. Bincsik wrote to you with copies
2 to Croft, Johnson, and Wright informing you that
3 "The majority of service lines in the city of
4 Flint are lead from the main to curb and in some
5 cases from the main to the house."

6 Then he goes on to report that
7 "Marvin from Veolia mentioned to me he thought
8 we needed to add phosphate to our water to help
9 prevent that."

10 A. Yes.

11 Q. Do you remember that discussion
12 with Mr. Bincsik?

13 A. I don't offhand, to be honest with
14 you. It was in the e-mail string here, though.

15 Q. And it was to you?

16 A. Yes.

17 Q. And it was prompted, was it not,
18 by the result of lead testing that you undertook
19 or commissioned at LeeAnne Walters' house at 212
20 Browning?

21 A. Correct. Yep.

22 Q. And that -- that lead testing
23 resulted in an extraordinarily high number for
24 lead present in the water; did it not?

1 MS. COLLINS: Objection to form.

2 A. Correct. Yes.

3 Q. It was 104 parts per billion?

4 A. Yes.

5 Q. And then in subsequent evaluations
6 of Ms. Walters' drinking water, subsequent lead
7 and copper tests, that 104 datum increased to
8 397, then to 707, and at one point, over 13,000
9 parts per billion.

10 Do you remember that?

11 A. I do remember the 397. I think
12 after that, it was EPA pulling testing for her.
13 But, yes, I did understand it was increasing.

14 Q. And you would have seen those
15 reports from the EPA; would you not?

16 A. I did not see the reports from the
17 EPA.

18 Q. Did you learn the level of lead
19 that was found in her water by the EPA?

20 A. I did learn -- yes, I did learn
21 the level.

22 Q. It was huge, wasn't it?

23 A. Uh-huh.

24 MR. MARKER: Objection to form.

1 Q. Your answer is yes?

2 A. Yes.

3 MR. KUHL: When you have a chance,
4 can we take a break?

5 MR. CAMPBELL: You want a break?

6 MR. KUHL: Yeah.

7 MR. CAMPBELL: Yeah. Sure.

8 That's fine. It's not a fluid retention
9 test.

10 THE VIDEOGRAPHER: We are going
11 off the record at 10:33 a.m.

12 (Recess taken.)

13 THE VIDEOGRAPHER: We are back on
14 the record at 10:43 a.m.

15 - - -

16 (Glasgow Deposition Exhibits 11 and 12 marked.)

17 - - -

18 BY MR. CAMPBELL:

19 Q. Mr. Glasgow, I've put two exhibits
20 before you. One is, like, a two-page exhibit on
21 DEQ letterhead, dated October 7, 2014.

22 Do you see that?

23 A. Yes.

24 Q. Is that 12?

1 A. Yes, it's Number 12.

2 Q. And the other is a single-page
3 document entitled "Consumer Notice of Lead &
4 Copper Results in Drinking Water," dated -- or
5 the sample date was November 19, 2014.

6 Do you see that?

7 A. Yes.

8 Q. If we could start with Exhibit 12.

9 This is -- the cover letter is
10 written by Mr. Prysby and Mr. Rosenthal of the
11 Office of Drinking Water & Municipal Assistance,
12 correct?

13 A. Correct, yes.

14 Q. And they were providing you with
15 the template or disclosure that was to be used
16 in giving notice because of a safe drinking
17 water violation related to total coliform
18 bacteria; is that right?

19 A. Correct.

20 Q. All right. So if you could turn
21 to the template that DEQ sent to you with the
22 October 7, 2014 letter. It starts at the top by
23 referencing a violation of a drinking water
24 standard, but then goes on to say that as

1 customers, as the city's customers, "You have a
2 right to know what happened and what we did to
3 correct the situation."

4 Do you see that?

5 A. Yes.

6 Q. You agree with me, sir, that the
7 city of Flint had a duty and responsibility to
8 the citizens of Flint to provide them with
9 relevant information bearing upon the safety or
10 quality of their drinking water?

11 A. Yes.

12 Q. And did you, sir, also envision
13 that the Department of Environmental Quality had
14 a duty and responsibility as the experts to
15 provide information to the city of Flint
16 residents if they became aware of a problem
17 related to health and safety with drinking
18 water?

19 A. Yes.

20 Q. If you go to the Number 11, the
21 "Consumer Notice of Lead & Copper Results in
22 Drinking Water."

23 A. Yes.

24 Q. And down about halfway down, about

1 right in the middle of the page, there's a whole
2 paragraph in italics.

3 Do you see that?

4 A. Yes.

5 Q. It reads, "Lead can cause serious
6 health problem if too much enters your body from
7 drinking water or other sources. It can cause
8 damage to the brain and kidneys, and it can
9 interfere with the production of red blood cells
10 that carry oxygen to all parts of your body.

11 "The greatest risk of lead
12 exposure is to infants, young children, and
13 pregnant women. Scientists have linked the
14 effects on the brain with lower IQ in children.

15 "Adults with kidney problems and
16 high blood pressure can be affected by low
17 levels of lead more than healthy adults. Lead
18 is stored in the bones and can be released later
19 in life.

20 "During pregnancy, the child
21 receives lead from the mother's bone's which may
22 affect brain development."

23 Did I read that correctly?

24 A. Yes.

1 Q. That's information that you knew
2 back in 2013; isn't that true?

3 A. Yes.

4 Q. You didn't contest that
5 information at all? You accept that as true,
6 don't you?

7 A. Yes.

8 Q. So you and your colleagues at the
9 city of Flint knew that lead in drinking water
10 could present very serious health risks to
11 children, pregnant women, and others, correct?

12 A. Yes. Correct.

13 Q. And if you were aware of lead in
14 the drinking water, you had a duty and
15 responsibility to the citizens of Flint to make
16 it known so they could take action to protect
17 themselves, didn't you?

18 A. Yes.

19 Q. And you would agree with the
20 proposition that the experts at the DEQ knowing
21 this information also had a duty and
22 responsibility to alert the citizens of Flint if
23 their drinking water was contaminated with lead
24 that could cause such serious problems, correct?

1 MR. KUHL: Objection to form.

2 MS. COLLINS: Objection to form.

3 A. Yes.

4 Q. Did the DEQ provide this template
5 to you for use?

6 A. Yes.

7 Q. Did the DEQ provide you with the
8 paragraph that I just read in italics?

9 A. Yes.

10 Q. So that physical causation medical
11 information related to lead and adverse human
12 consequences came from the DEQ to you?

13 A. Correct.

14 Q. You didn't undertake an
15 independent research into medicine in order to
16 come up with that information, did you?

17 A. No.

18 - - -

19 (Glasgow Deposition Exhibit 13 marked.)

20 - - -

21 MR. CAMPBELL: City of
22 Flint_FED-0542925. And then it's a
23 multi-page document, so ...

24 MR. KIM: 05429 --

1 MR. CAMPBELL: 542925.

2 MS. DEVINE: And the last one was

3 COF_FED_0109591.

4 BY MR. CAMPBELL:

5 Q. I've placed before you just the

6 cover page and one attached page of a

7 December 2013 report entitled "City of Flint

8 Water Reliability Study Distribution System."

9 Do you see that?

10 A. Yes.

11 Q. And the attached page is page 29,

12 city of FLINT-FED_0542598.

13 Do you see that?

14 A. Yes.

15 Q. What was -- what was Rowe? What

16 is Rowe?

17 A. Just an engineering firm that I

18 knew the city had used on -- on numerous

19 occasions, whether it be for roads or water

20 treatment.

21 Q. Rowe is an engineering consulting

22 firm with offices in Flint, Michigan?

23 A. Correct. Yes.

24 Q. Has a longstanding relationship

1 with the city of Flint?

2 A. Yes.

3 Q. And was used in conjunction with
4 the water treatment plant and drinking water
5 issues over time, correct?

6 A. Yes. Correct.

7 Q. Apparently Rowe Professional
8 Services Company produced a report on the
9 distribution system, dated December 2013; is
10 that right?

11 A. Yes.

12 Q. I only gave you one page of it,
13 because there was only one paragraph that was of
14 interest to me at this time. I have the rest of
15 it if you want to see it.

16 But paragraph 4.4 of this report
17 in December of 2013 is entitled "Water
18 Distribution System."

19 Do you see that?

20 A. I do, yes.

21 Q. And Rowe reports that "Much of the
22 city's water distribution system is over 70
23 years old and is in need of rehabilitation or
24 replacement. In addition, there is a

1 significant amount of 4-inch water mains in the
2 system that's over 70 years old prone to water
3 main breaks and unable to provide modern
4 pressures and fire flows."

5 Did I read that correctly?

6 A. Yes.

7 Q. I had asked you about the
8 distribution system in August of 2013 when
9 Mr. Bincsik wrote his e-mail about that.

10 Do you remember?

11 A. I do, yes.

12 Q. So now fast forward. We're in
13 December of 2013. We're four months away from
14 the startup of the water treatment plant, and
15 Rowe is identifying a continuing deteriorated
16 status of the distribution system, correct?

17 A. Correct, yes.

18 Q. You would have received a copy of
19 this report from Rowe?

20 A. Possibly or would have talked with
21 Mr. Bincsik about it.

22 Q. Okay. But you agree with the
23 proposition that between August and December of
24 2013, now four months short of the startup of

1 the water treatment plant, the water
2 distribution system had not been improved?

3 A. Correct. Yes.

4 - - -

5 (Glasgow Deposition Exhibit 14 marked.)

6 - - -

7 MS. DEVINE: COF_FED_0107003.

8 BY MR. CAMPBELL:

9 Q. Have you had a chance to look at
10 that?

11 A. Yes, I have.

12 Q. In Exhibit 14, you and Duffy
13 Johnson, with a copy to Brent Wright, are
14 talking about comparative data between the Lake
15 Huron water from the city of Detroit and the
16 Flint River data.

17 Do you see that?

18 A. Yes.

19 Q. And you make reference to
20 comparisons. Did you ever actually do the
21 comparisons? Did you ever reduce that to a
22 writing?

23 A. It seemed like we did. It seemed
24 like I had made a little chart kind of showing

1 finished water characteristics of both Detroit
2 water and city of Flint water or what I
3 anticipated it would be.

4 Q. Why are you using that verb?

5 A. Well, based -- if I made a
6 comparison from when I think I made it, I used
7 information from our previous test runs when we
8 were just a standby plant.

9 Q. Okay. What would this report look
10 like? Because I don't -- I can't bring it to
11 mind.

12 A. It would have been just a
13 single-page spread -- simple Excel spreadsheet
14 probably.

15 Q. So Excel spreadsheet?

16 A. Yep, Detroit water and some
17 parameters and city of Flint water.

18 Q. What would the title be?

19 A. I'm guessing it would be
20 comparisons. It's hard to say.

21 Q. But you're reasonably confident
22 you did that comparison?

23 A. Yes.

24 Q. And if we can find the document,

1 we'll know what the comparative data is?

2 A. Yeah.

3 Q. Okay. So in April -- what was the
4 start date? April 24?

5 A. Yeah, it was towards the end of
6 April. I can't remember exact date.

7 Q. I'm just going to use April,
8 because I don't remember the precise date.

9 In April when you started up, I
10 want to know what processes were operational.
11 Was the ozone system fully functional?

12 A. It was functional --

13 Q. Was it fully functional?

14 A. -- but I won't say fully
15 functional.

16 Q. What was wrong with it?

17 A. Part of the internal components of
18 the ozone generator -- dielectrics I believe
19 they're called. Basically a type of lightbulb
20 almost -- needed to be replaced. And I can't
21 recall exactly when -- when that occurred. I
22 don't believe it was prior to operation. So
23 ozone was running, just not as efficient and as
24 well as it could have been.

1 Q. When I use the term "dielectric,"
2 I use it to mean a fluid that suppresses
3 electrical charges like in a capacitor.

4 A. Okay.

5 Q. Is that how you --

6 A. Yeah, it would be similar to that
7 as well, yes.

8 Q. Okay. Were all polymer systems
9 functional?

10 A. I cannot recall. I don't believe
11 so.

12 Q. The polymer systems would include
13 coagulation, softening, and filtration?

14 A. Polymer would have been -- what I
15 remember the polymers being used for was really
16 the softening process.

17 Q. Okay. Was the ferric chloride
18 system functional?

19 A. It was functional, yes.

20 Q. Was the lime system functional?

21 A. Yes.

22 Q. Was the soda ash system
23 functional?

24 A. We had no soda ash.

1 Q. Soda ash had been recommended by
2 prior consultants, correct?

3 A. Correct. As part of the softening
4 process, yes.

5 Q. What is the difference between
6 lime softening and soda ash softening?

7 A. Well, when you do a combination of
8 lime and soda ash, you can reduce the hardness
9 level. You can -- hardness is broken up in two
10 different types; carbonate hardness and
11 noncarbonate hardness. Lime will take care of
12 the carbonate hardness. Soda ash would help
13 alleviate that noncarbonate hardness.

14 Q. How would the use of a soda ash
15 system have benefited Flint drinking water after
16 the switch?

17 A. It would have allowed us to get
18 our softening numbers down even lower. So our
19 final hardness numbers would have been much
20 lower with soda ash.

21 Q. Should we conclude that the
22 decision not to use the recommended soda ash
23 system for softening was made by people
24 occupying a higher position of authority than

1 you?

2 A. Yes.

3 Q. Would that have been the emergency
4 manager?

5 A. It could have went all the way up
6 there, yes.

7 Q. It would have at least been Howard
8 Croft?

9 A. Correct. Yes.

10 Q. Okay. And it was driven by money.

11 MR. KIM: Objection to form.

12 A. From my understanding.

13 Q. Okay. Was the carbon dioxide
14 system functional?

15 A. It was functional, but that needed
16 some I'll call it TLC. It needed a little care
17 to make it better.

18 Q. What are you saying? It was
19 barely functional?

20 A. It was functional. It didn't work
21 as well as I wanted to, I'll put it that way.

22 Q. All right. Was there a
23 functioning phosphate system available?

24 A. There was no phosphate system

1 available.

2 Q. Regardless of the type of
3 phosphate to be used, if it were used, one of
4 its uses would have been for corrosion control?

5 A. Correct. Yes.

6 Q. And corrosion control was not
7 implemented in any shape by the water treatment
8 plant, correct?

9 A. Correct.

10 MR. KUHL: Objection to form.

11 Q. And I read in the transcripts -- I
12 think I read this -- that you did not have the
13 capacity to feed phosphate into the system?

14 A. Correct. Yes.

15 Q. What does that mean?

16 A. Well, we had no storage area for
17 the chemicals. We had no feed pumps in order to
18 pump it into the treatment process. So, yeah,
19 there was no -- no equipment ready to go to be
20 able to add that treatment chemical.

21 Q. Had phosphate been used at the
22 water treatment plant in the past?

23 A. Not in my time there.

24 Q. Okay. If you had utilized

1 phosphate, either a polyphosphate blend or
2 orthophosphate, as a corrosion control chemical,
3 would you have had to run that past the DEQ,
4 Mr. Busch and Mr. Prysby, and get their
5 approval?

6 A. Yes. Any time I would make a
7 change to the treatment process, I would have to
8 have written permission from them.

9 Q. So at the time of the switch, was
10 the distribution system segregated, or was there
11 a mix of water from the water treatment plant
12 and Detroit?

13 A. Yeah. Once we switched, then we
14 introduced that mixture, so there was a mixture
15 in the system for a while after the original
16 switch.

17 Q. For how long was there a mixture?

18 A. Oh, I'd have to look back at some
19 data. It was possibly close to a month that we
20 could see a mixture in there.

21 Q. So the city of Detroit continued
22 to provide some water to you for a month after
23 the switch?

24 A. No. That was based just on what

1 was in our reservoirs before we started the
2 switch in the water already in the system.

3 Q. I get it.

4 So to the extent that there was
5 Detroit treated water in the reservoirs, you
6 would use that mixed with the Flint River?

7 A. Yes, in a sense. That was just I
8 guess the causation of switching. You know,
9 there's already water in all the pipes in the
10 system, little levels in our reservoir, and then
11 we add more water. So for a while, we seen a
12 mix in the data.

13 Q. Was there an operational ammonia
14 system?

15 A. No.

16 Q. Did you have the capacity to form
17 chloramines?

18 A. No, we did not have that capacity.

19 Q. What was the logic for deciding
20 against the formation of chloramines for
21 residual disinfection?

22 A. Well, chloramines -- that's a
23 whole different ball of worms using chloramines.
24 That balance of the chemicals used needs to be

1 tightly monitored, a little more costly. And
2 for years, it seemed like in water treatment,
3 municipalities and stuff had switched to that,
4 and they'd started switching back because of
5 some of the other issues that could be caused
6 with chloramines.

7 Q. Well, if you weren't going to
8 utilize chloramines for residual disinfection,
9 why wasn't ammonia then used?

10 A. Ammonia wasn't used.

11 Q. That's what -- why?

12 A. Oh, yeah, there's no need for
13 ammonia if you're not using chloramines.

14 Q. Okay. That's it. No need for it.
15 I got it.

16 Did you have a system utilizing
17 potassium permanganate?

18 A. No.

19 Q. Sodium chlorite?

20 A. No.

21 Q. Powdered activated carbon?

22 A. No.

23 Q. How was the ferric chloride dose
24 selected?

1 A. Usually based off jar test in the
2 lab and based off history of our test runs.

3 Q. Okay. So it would have been
4 decided by you?

5 A. Yes.

6 Q. Not in conjunction with anybody
7 else?

8 A. No, no. Originally it would be
9 from me.

10 Q. Okay. So if we want to go look
11 and see the data that you utilized to select the
12 ferric chloride dose, where would we look?

13 A. Anywhere in the lab data from the
14 prior test runs prior to the switch.

15 Q. So prior to April of 2014, you had
16 received recommendations for a ferric chloride
17 dosing both from LAN and SEG; isn't that right?

18 A. I do not recall. Possibly.

19 Q. If I represent to you that LAN and
20 SEG recommended dosing ferric chloride 40 to
21 80 milligrams per liter, does that refresh your
22 memory?

23 A. It really doesn't.

24 Q. Okay. So if I asked you why it

1 wasn't followed, you don't have anything to say
2 about that?

3 A. Correct. Yes.

4 Q. If we look at the ferric chloride
5 dosing from your plant data, it changes?

6 A. Yes.

7 Q. And it changes in conjunction with
8 chemical reserves, with storage of the chemical.

9 What was generating those
10 decisions to change the ferric chloride dosing
11 on a day-to-day basis?

12 A. Usually it was the parameters of
13 the incoming river water that we were attempting
14 to treat. So our ferric chloride is used to
15 grab ahold of particulate matter in the water
16 and settle it out.

17 So after a heavy storm, the river
18 would get real cloudy, extra particulate matter,
19 we'd increase the ferric dosage to adjust. And
20 the river changed -- I don't want to say hourly,
21 but it was -- it was a very dynamic water
22 source, so it adjusted.

23 Q. And by that terminology, "a
24 dynamic water source," you're saying the

1 characteristics changed regularly?

2 A. Yes.

3 Q. That was different, I guess, from
4 what you were getting out of Detroit?

5 A. Correct. Yes.

6 Q. Substantially different?

7 A. Yes.

8 Q. Requiring more people and more
9 time?

10 A. Yes. Correct.

11 Q. Which you didn't have?

12 A. Correct.

13 Q. What was the pH for the softening
14 basins?

15 A. The pH, we would raise up to close
16 to 12 to get the softening reaction to take
17 place. And then after it left that part of the
18 softening process, that's when we hit it with
19 carbon dioxide to bring that pH back down.

20 Q. Okay. What were you shooting for?
21 What did you select as a pH after carbonation?

22 A. Roughly 7.8. High 7s.

23 Q. How was the carbon dioxide dose
24 selected and measured?

1 A. It was measured via controls, but
2 the dose was calculated by that final pH to get
3 that pH to where we wanted it.

4 Q. Was the carbon dioxide dosage
5 measured in units like pounds per day?

6 A. Yes.

7 Q. Is that the unit of measurement
8 you used?

9 A. Yes, it was actually. Yes.

10 Q. And the chlorine dose, how was
11 that selected?

12 A. That was also something we'd
13 record kind of pounds per day, but we would have
14 a set chlorine residual that we wanted to hit,
15 you know, every day. So we would adjust
16 accordingly.

17 Q. How did you measure the chlorine
18 dosage?

19 A. From what we were putting in -- we
20 had some inline monitors to tell us the dosage,
21 but we would always follow up with hands-on
22 tests from one of my lab staff to verify.

23 Q. But how much of your water
24 treatment plant was automated?

1 A. Very small portion. Not much at
2 all.

3 Q. Can you quantify it as a
4 percentage?

5 A. Oh, maybe 20 percent.

6 Q. And how much of the -- of that
7 20 percent of the plant that was automated
8 involved automation of flow?

9 A. A large portion.

10 Q. So most of the 20 percent had to
11 do with flow?

12 A. Yes.

13 Q. What about chemical dosing?

14 A. That was --

15 Q. Was that manual?

16 A. That was all manual, yep.

17 Q. Measuring things like turbidity,
18 pH, and temperature all manual?

19 A. Manual. We had some inline
20 meters, but we'd always verify with manual
21 reads.

22 Q. I think I know the answer to this.
23 But after -- on and after April of 2014, what
24 training did the staff members have with respect

1 to operation of these processes? And I'm
2 referring to ozone, coagulation, softening
3 filtration. What training did they have?

4 MR. KIM: Objection as to form.

5 A. I couldn't tell you, to be honest
6 with you. Not -- not much more than the
7 hands-on training of actually operating
8 everything.

9 Q. One of the things that happened is
10 that on and after the change in raw water
11 source, you added a number of employees,
12 correct?

13 A. Correct, yes.

14 Q. Most of -- most of them, if not
15 all of them, had no real prior experience in
16 operating a water treatment plant, correct?

17 A. Correct.

18 MR. KIM: Objection as to form.

19 Q. And prior to doing that, you
20 operated what you described in your testimony as
21 a skeletal crew?

22 A. Correct. Yes.

23 Q. That's your terminology, skeletal
24 crew?

1 A. Yes, that's mine.

2 Q. Define for us what you mean by
3 "skeletal crew."

4 A. Basically the bare bones of what
5 was need to cover -- cover what needed to be
6 done. And that's prior to operation. So most
7 of the time --

8 Q. Is it one person per eight-hour
9 shift or 50?

10 A. Yeah. Well, most of the time when
11 we're in standby mode, we had about 12 to 15
12 people that were first shift to run the plant.
13 On off shifts, there was just a single
14 individual there.

15 Q. What is an off shift?

16 A. Well, it was second and third
17 shift basically prior to full-time operation.

18 Q. So daytime, evening, and early
19 morning?

20 A. Yep. We'd have our normal day
21 shift, and then you'd have your second shift
22 start at 4:00 p.m. to go to midnight roughly.
23 Had to be one individual on hand. And then from
24 midnight until 8:00 a.m. would be one other

1 individual.

2 Q. So on and after the switch in
3 April of 2014, this new cohort of employees had
4 to be trained on a -- on-the-job training
5 process, right?

6 A. Pretty much, yep.

7 Q. How long did that take?

8 MR. KIM: Objection as to form.

9 MR. MARKER: I'll join.

10 A. It was constantly ongoing.

11 Q. It was a problem, right?

12 MR. KIM: Objection as to form.

13 MR. MARKER: I'll join.

14 A. From my personal view, yes.

15 Q. That was one of the problems that
16 you raised in your April memorandum to the Grand
17 Poobahs at the city of Flint saying, "I don't
18 want to do this." Right?

19 MS. COLLINS: Objection to form.

20 MR. KIM: Objection to form,
21 foundation.

22 Q. You made your views known
23 repeatedly, didn't you?

24 MS. COLLINS: Objection to form.

1 A. I attempted to, yes.

2 Q. And you made your views known
3 about the problems that you could envision with
4 respect to the Flint water treatment plant both
5 to your supervisors at the city of Flint, but
6 also to the DEQ, correct?

7 A. Correct.

8 Q. Can you tell us what a weir is,
9 w-e-i-r?

10 A. A weir, yes. I'd almost rather
11 draw a picture. But anyways, a weir, you know,
12 say you have a mud tank of water, and what
13 happens a lot of times in the water treatment
14 process, you move water throughout a plant, and
15 a lot of times -- like, for instance, I'll talk
16 about the area where we added ferric chloride to
17 the water.

18 We add ferric chloride to the
19 water, settle heavy particles out. A weir would
20 be at the top of the tank to allow water to
21 slowly drift over and maybe catch anything else
22 that's going to go on to the next process. So
23 it's really just -- just a wall with some slits
24 to let water fall out.

1 Q. It's like a dam?

2 A. Yeah.

3 Q. Right?

4 A. Yep, that's a better, easier,
5 quicker explanation.

6 Q. What was the condition of the
7 weirs in the north and south basin?

8 A. Yeah, in the -- I have to think a
9 minute. One of the basins, north or south --
10 I'm trying to remember. The weirs hadn't been
11 correctly supported. So when the one softening
12 clarifier was full, the weirs did not operate as
13 intended.

14 Q. The clarifiers are large pieces of
15 equipment; are they not?

16 A. Yes, they are.

17 Q. And the weirs were not level, were
18 they?

19 A. No.

20 Q. And that interrupted or interfered
21 with the process, didn't it?

22 A. Yes, that did disturb the process.

23 Q. Would you equate a clarifier with
24 a sludge collection mechanism? Are they one and

1 the same --

2 A. Yes.

3 Q. -- or are they different?

4 One and the same?

5 A. No, they could be one and the
6 same.

7 Q. What was the condition of the
8 clarifiers?

9 A. The clarifiers, other than the
10 weirs, I thought were okay.

11 Q. What was the --

12 A. Sludge --

13 Q. I'm sorry.

14 A. Oh, go ahead. I'm sorry.

15 No, I was going to say I don't
16 really recall any issues with the sludge
17 collecting systems, that and the clarifier
18 itself.

19 Q. What do you remember about the
20 condition of the concrete walls and floors in
21 the north and south basins?

22 A. I'm trying to picture, and I don't
23 really recall much.

24 Q. What do you remember about the

1 chemical feed systems, the condition of them?

2 A. Yeah, I know the chemical feed
3 systems that were going into the clarifier and
4 the softening process, they were -- they were
5 not really functional. I remember running tubes
6 along the floor. You know, we had some kind of
7 halfway fabbed polymer lines running to the
8 clarifiers when we first started.

9 Q. I know you didn't utilize soda
10 ash, but did you have the capacity to use soda
11 ash?

12 A. There was some old equipment
13 around there that we used prior to the '70s I
14 think when they softened and used water that
15 were there. I had never seen them in operation
16 in my time there.

17 Q. So you don't know whether they
18 were functional?

19 A. I don't believe they were
20 functional. I wouldn't have put any money on
21 it.

22 Q. Was part of the flow bypassing the
23 coagulation basins?

24 A. Yes, at times.

1 Q. And why would that be so? What
2 was the reason for that?

3 A. The reason for that is -- well, to
4 be honest, my reasoning is I didn't really want
5 to soften the water. It was a headache. And
6 with my untrained staff, topped by such a
7 dynamic process that changes was kind of a pain.

8 So we would bypass some of the
9 softening just in the event something happened
10 and we were still treating water and getting
11 water out. But softening was mainly because I
12 didn't want to soften the water.

13 Q. And you didn't want to soften
14 water why?

15 A. For numerous reasons. But number
16 one is my staff and the lime softening process
17 and the way our plant was set up was not -- not
18 ideal in my eyes. Softening to me -- softening
19 the water is just an aesthetic. There's no
20 regulations on that. And I thought it would be
21 better for me and my staff if we didn't soften,
22 because in our prior test runs, we didn't
23 practice softening. And on top of that, we
24 would send out hard water, which usually

1 wouldn't cause as much problem in the pipes in
2 my eyes.

3 Q. Okay. How did you control the
4 volumes of the flow --

5 A. Where?

6 Q. -- bypassing or following the
7 system as designed?

8 A. It was a simple valve. We had
9 flow meters, and we could adjust valves to try
10 to divert the amount of water we wanted to
11 divert around softening.

12 Q. Was it a separate physical conduit
13 that passed the water?

14 A. Yes.

15 Q. Did that bypass operation impact
16 the pH of the water?

17 A. Yes, it would.

18 Q. How?

19 A. It would actually raise the pH a
20 little. We would use less carbon dioxide. The
21 river water was kind of a high pH anyway,
22 usually above 8, and our softening, we'd get the
23 pH up to 12, but then mix it back together and
24 add carbon dioxide to bring that pH down. It

1 would -- it would utilize less carbon dioxide to
2 mix like that.

3 Q. So in the late fall of 2015, early
4 2016, you put in place a phosphate feed for the
5 system?

6 A. Correct. Yes.

7 Q. Can you describe that for us?

8 A. Yeah, somewhat. I mean, it was a
9 pretty simple system, a couple feeders. When we
10 originally installed it, we didn't have the full
11 capacity to hold our 30-day supply of chemical
12 like we would usually be required, but it was
13 kind of get it up and going as fast as we could.

14 We used a garage bay to house the
15 equipment and kind of foam insulated all the way
16 in from what I recall, and then pipe it right
17 into our plumbing. I don't know --

18 Q. What was the capital cost for that
19 system?

20 A. I can't remember. Maybe a couple
21 hundred thousand dollars, but my memory is kind
22 of jogged from all the years.

23 Q. Okay. What was the annual cost
24 for the phosphate chemicals?

1 A. It was pretty insignificant to the
2 rest of the stuff.

3 Q. What is that? Everybody here
4 wants to know what insignificant is in the
5 measure of the city of Flint.

6 A. Yeah, it's hard to say. I'm going
7 to say a couple hundred thousand dollars a year.

8 Q. Okay. So -- and was the phosphate
9 that was selected orthophosphate?

10 A. Yes.

11 Q. So orthophosphate ultimately put
12 in place by the city of Flint late fall of 2015,
13 early 2016, the combined cost of the capital
14 outlay and the annual cost of the chemicals,
15 400,000 bucks?

16 A. Yeah, roughly.

17 Q. So if that 400,000 bucks were
18 spent back prior to April of 2014, a lot of the
19 problems we're talking about wouldn't have
20 existed, right?

21 MR. MARKER: Objection; form
22 foundation.

23 MR. KIM: Objection.

24 A. Possibly, yeah.

1 Q. In one of the days of testimony --
2 I can find it, if need be. But you referenced
3 the EPA coming into your plant -- and I took it
4 to mean late 2015, but I could be wrong. And I
5 will find it if need be. You reference the EPA
6 coming into your plant and putting in place a
7 pipe loop system.

8 Do you remember testifying to
9 that?

10 A. Yes, I do.

11 Q. When was that?

12 A. Well, I'm trying to think when
13 that was. I don't know that I can put a
14 specific date on there or even a month for you.
15 It seemed like it was late in 2015.

16 Q. Was it right on the cusp of going
17 back to the city of Detroit?

18 A. It seems like it was. I don't
19 think they were installed until after the switch
20 had been made back to the Detroit water.

21 Q. Who from the EPA came into your
22 facility and put in place pipe loops?

23 A. I don't know if I can remember the
24 name. Darrell.

1 Q. Darrell Lytle?

2 A. Lytle, yep.

3 Q. L-y-t-l-e.

4 A. Yep.

5 Q. Did you come to know that Darrell
6 Lytle and Michael Schock were two of the
7 premiere lead and copper scientists for the EPA?

8 A. Yes. I come to know that as time
9 went on and was able to gain a lot of knowledge
10 from them.

11 Q. Okay. So Michael Schock -- maybe
12 not Darrell Lytle, but Michael Schock was
13 recommended as an EPA consultant to the city of
14 Flint and to the DEQ back in February of 2015.

15 Do you remember that?

16 MR. KIM: Objection as to
17 foundation.

18 A. Vaguely, yes.

19 Q. Okay. Well, we'll get to it.

20 In any event, can you describe for
21 us what you observed about this pipe loop system
22 that Mr. Lytle put in place?

23 A. Yes. It was just a -- I don't
24 want to call it too elaborate, but basically a

1 big wall with just sections of pipe you could
2 put in and run your treated water through, and
3 then you could take the pipe off, observe any
4 effects that happened to the pipe, so ...

5 Q. Did you come to understand that
6 the pipe loops system was a way to test and
7 evaluate the impact of the water on the
8 distribution system?

9 A. Yes.

10 Q. Was the pipe loop system -- was
11 the pipe loop testing discussed prior to April
12 of 2014?

13 A. No. My first recollection was
14 talking with Mr. Lytle about it.

15 Q. Do you remember that LAN and
16 Warren Green recommended pipe loop testing back
17 in 2013?

18 A. No, I do not recall that.

19 Q. In any event, you are 100 percent
20 confident that no pipe loop testing was
21 performed prior to Mr. Lytle of the EPA showing
22 up right on the cusp of the change back to
23 Detroit for water?

24 MR. MARKER: Objection; form.

1 A. Yes.

2 Q. I referenced powdered activated
3 carbon at the treatment plant before.

4 Do you remember that?

5 A. Yes.

6 Q. When was the decision made to
7 eliminate that, and who made it?

8 A. I don't recall ever discussing it,
9 to be honest with you. I think years ago they
10 had an old powdered activated carbon set up
11 there, but it hadn't been touched in 20 or 30
12 years.

13 Q. So it was before your time?

14 A. Yes.

15 Q. Do you know what alternative
16 treatment was put in place to replace the
17 powdered activated carbon?

18 A. No, I do not.

19 Q. Prior to ferric chloride, the
20 water treatment plant was using alum, correct?

21 A. Yeah, I'm unaware.

22 Q. Is that before your time as well?

23 A. That was before my time as well.

24 Q. So you don't know the reasons of

1 why the switch was made from alum to ferric
2 chloride?

3 A. No, I can't.

4 Q. And I think I mentioned SEG
5 before. You never read their report?

6 A. No.

7 Q. When VNA -- when Veolia North
8 America came in in February of 2015, one of
9 the -- it made a series of recommendation to the
10 water treatment plant -- or the city of Flint,
11 one of which was to increase the dosage of
12 ferric chloride.

13 Do you remember that?

14 A. Yes.

15 Q. And that recommendation was not
16 followed, was it?

17 A. No, not --

18 Q. Do you know why?

19 A. Not apparently -- no, I can't -- I
20 can't say why.

21 Q. Do you know who made the decision?

22 A. I can't say.

23 Q. Would that be the higher-ups?

24 A. Most likely, yeah.

1 Q. Was it done for money?

2 MR. KIM: Objection as to form and
3 foundation.

4 MR. MARKER: I'll join.

5 A. A lot of things I wasn't privy to
6 I hate to say.

7 Q. One of the --

8 MR. CAMPBELL: Mark that as the
9 next exhibit.

10 - - -

11 (Glasgow Deposition Exhibit 15 marked.)

12 - - -

13 MS. DEVINE: This is

14 COF-FED_0628049.

15 MR. KIM: This is Number 15?

16 MS. DEVINE: Yes.

17 BY MR. CAMPBELL:

18 Q. I'm really going to direct your
19 attention to pages 9 and 10.

20 A. Okay.

21 Q. "Conclusions and Next Steps."

22 A. Okay.

23 Q. So if you look at the bottom of --
24 in the table that is present there, go from one

1 page to the next. Really step priority 2 is the
2 one that I'm going to be asking you about.

3 Have you had chance to see that?

4 A. Yep, been glancing over it here.

5 Q. This is the executive summary of
6 the water quality report dated March 12, 2014
7 from Veolia North America to the city of Flint.
8 And it's actually addressed to Emergency Manager
9 Jerry Ambrose. You see that on page 1, I guess
10 it is.

11 First question: Did you get a
12 copy of this? Did you see a copy of this?

13 A. Not until months -- excuse me.

14 Not until months later when I
15 asked Mr. Daugherty Johnson to give me a copy.

16 Q. Okay. So eventually you saw it?

17 A. Eventually, yeah. I think it was
18 summer of that '15.

19 Q. Okay. So in the transactional
20 period, when Veolia North America was delivering
21 this off to Mr. Ambrose, you were not party to
22 it?

23 A. Correct.

24 Q. You asked your boss, Duffy

1 Johnson, for a copy sometime in the summer of
2 '15?

3 A. Yeah, as it got closer to
4 summertime, yes.

5 Q. What motivated you to ask for a
6 copy of it then?

7 A. Just that I would hear certain
8 recommendations that Veolia had made, but I had
9 never seen the report.

10 Q. Okay.

11 A. Figuring I'm the --

12 Q. Do you know why your superiors
13 didn't provide you with a copy of this executive
14 summary?

15 A. I could not tell you. It was kind
16 of hush hush the whole time Veolia was in town.

17 Q. If you look at the first
18 priority -- the first sentence of the first
19 priority, number 1, priority number 1, it reads,
20 "Implement operating programs for process
21 control, lab, quality assurance/quality control,
22 maintenance, and training."

23 Do you see that?

24 A. Yes.

1 Q. That's totally consistent with
2 what you were saying before the switch over to
3 the Flint River, isn't it?

4 A. Yes.

5 Q. It's basically saying that you
6 needed to upgrade your staff significantly to
7 run this plant properly, correct?

8 A. Correct.

9 Q. But you didn't learn that VNA,
10 Veolia North America, made that its very first
11 recommendation to the city until the summer of
12 2015?

13 A. Correct.

14 Q. If you look at the second
15 priority, and go down to -- it's the third
16 paragraph on the top of the next page.

17 It reads, "Contract with your
18 engineer and initiate discussions with the state
19 on the addition of a corrosion control chemical.
20 This action can be submitted and discussed with
21 the state at the same time as the other chemical
22 and filter changes saving time and effort.

23 "Our target dosage of
24 0.5 milligrams per liter phosphate is suggested

1 for approved corrosion control."

2 Did I read that correctly?

3 A. Yes, you did.

4 Q. When did you hear about that
5 recommendation?

6 A. It would have been -- yeah,
7 probably late summertime of '15 once we started
8 the design to install.

9 Q. Did you ever learn that Warren
10 Green of LAN on learning about that
11 recommendation for engaging the engineer -- the
12 city's engineer and having discussions with the
13 state about corrosion control and which chemical
14 offered to undertake that task?

15 A. I was not aware.

16 Q. Who was the primary contact
17 between Warren Green and the city of Flint?

18 A. I would have to say either
19 Mr. Johnson or Mr. Croft.

20 Q. Okay.

21 - - -

22 (Glasgow Deposition Exhibit 16 marked.)

23 - - -

24 MS. DEVINE: COF_FED_0391706,

1 Exhibit 16.

2 BY MR. CAMPBELL:

3 Q. Have you seen this press release
4 before?

5 A. Yes.

6 Q. Did you come to know that the city
7 of Flint actually created a couple of different
8 committees or task forces related to the
9 drinking water problems that existed at the
10 time?

11 A. Yes, I was aware.

12 Q. Were you a member of either one or
13 both of those task forces?

14 A. I was a member on one of them.

15 Q. Do you remember which one you were
16 a member of?

17 A. I couldn't tell you. To be honest
18 with you offhand, it's been a few years now.

19 Q. Does this January 16, 2015 press
20 release square with your understanding of the
21 timing of when those task forces were put in
22 place?

23 A. Yes.

24 Q. So mid to late January 2015?

1 A. Yes.

2 - - -

3 (Glasgow Deposition Exhibit 17 marked.)

4 - - -

5 MS. DEVINE: COF-FED_0028974.

6 BY MR. CAMPBELL:

7 Q. Have you had a chance now to see
8 this document? It's a very short e-mail.

9 A. Yes.

10 Q. And it's from your boss,
11 Mr. Croft. I don't see you on there, but
12 Mr. Prysby, Mr. Busch, Warren Green, and Joan
13 Rose of Michigan State is on there.

14 Do you see that?

15 A. Yes.

16 Q. Did you come to know that Joan --
17 Professor Joan Rose was one of the participants
18 in one or more of the task forces related to the
19 Flint drinking water problem?

20 A. Yes, I was.

21 Q. What did you learn about Joan
22 Rose?

23 A. Well, I've got to stimulate my
24 memory here. Not a lot is coming to me. She

1 just seemed -- it seemed like she was more of a
2 microbiologist-type and dealing with different
3 issues that we had related -- it seemed like I
4 remember Howard bringing her in in regards to
5 residents' inquiries about rashes and itchy skin
6 and -- so I do remember her at one of these
7 meetings. I didn't have a lot of interaction
8 with her, but ...

9 Q. Did you come to know that
10 Professor Rose is one of the leading authorities
11 in the world on public drinking water?

12 A. I knew she was -- she come in very
13 high regard, so I will say that.

14 MR. CAMPBELL: Could you mark this
15 as the next exhibit.

16 MS. DEVINE: COF_FED_0175479.

17 - - -

18 (Glasgow Deposition Exhibit 18 marked.)

19 - - -

20 BY MR. CAMPBELL:

21 Q. So Exhibit 18 is a copy of an
22 e-mail from Professor Rose to Howard Croft, the
23 mayor of Flint, Jerry Ambrose, Elizabeth Murphy.

24 Who is she?

1 A. She was an assistant to the
2 emergency manager or something like that.

3 Q. Duffy Johnson, and someone else at
4 MSU. I don't recognize the name.

5 A. I don't recognize that either.

6 Q. All right.

7 A. Sorry.

8 Q. If you take a look at this e-mail
9 from Professor Rose to Howard Croft, in the
10 second paragraph she writes, "I definitely think
11 more testing for hardness, iron, TDS, E. coli,
12 maybe lead from people who are having aesthetic
13 issues is needed."

14 Do you see that?

15 A. Yes.

16 Q. Did Mr. Croft or Mr. Ambrose
17 provide this e-mail to you --

18 A. No.

19 Q. -- at the time?

20 Did you learn that Professor Rose
21 was recommending testing for lead in January of
22 2015?

23 A. No, I never did. I never was
24 aware of that.

1 Q. That's something that would have
2 been of interest to you, right?

3 A. Absolutely.

4 Q. Because it wasn't -- it wasn't 30
5 days later that you were generating test results
6 from LeeAnne Walters' house showing extremely
7 high lead content, right?

8 MR. MARKER: Objection to form.

9 A. Right. Correct.

10 Q. And one of the things that you
11 observed from early on after the switch to the
12 Flint River as the raw water source in terms of
13 complaints from the customers in Flint was that
14 many of them -- maybe not all, but many of them
15 were complaining about the color of water --

16 A. Yes.

17 Q. -- as being yellow or brown?

18 A. Correct. Yep.

19 Q. And some of them complained about
20 sediment in the water, didn't they?

21 A. Yes.

22 Q. And you -- when you saw those
23 complaints about miscolored water, yellow or
24 brown, with sediment, you took that to be an

1 indication that corrosion was underway, correct?

2 MR. MARKER: Objection to the form
3 of the question.

4 A. Yeah, I'm going to say over time I
5 took it that way.

6 Q. Okay.

7 A. Discolored water and rusty water
8 wasn't out of the ordinary prior to the switch
9 either.

10 MR. CAMPBELL: I've got -- this
11 one doesn't have a Bates number on it.
12 I don't know why, but I've got a couple
13 extra copies I can pass around.

14 MS. DEVINE: I can e-mail it to
15 you.

16 - - -

17 (Glasgow Deposition Exhibit 19 marked.)

18 - - -

19 MR. CAMPBELL: What's this number
20 here?

21 MS. DEVINE: It's 5-09-2016
22 SOM0044352. It's not a Bates on the
23 actual document.

24 MS. COLLINS: Can you read that

1 one more time?

2 MS. DEVINE: It's 05-09-2016

3 SOM0044352.

4 MR. KIM: Exhibit 19 or Exhibit

5 20?

6 MR. CAMPBELL: 19.

7 BY MR. CAMPBELL:

8 Q. You've had a chance to scan that,
9 Mr. Glasgow?

10 A. Yep.

11 Q. On the first page of this exhibit,
12 Professor Rose identifies herself as a public
13 health water microbiologist and the Homer Nowlin
14 Chair in water research at Michigan State.

15 Do you see that?

16 A. Yep.

17 Q. She makes reference in the second
18 paragraph to Dr. Marc Edwards' proposal and
19 methods and results for lead.

20 Do you see that?

21 A. Yes.

22 Q. And Marc Edwards came out with his
23 proposals -- and I think I've shown you his
24 PowerPoint -- sort of at mid to end of

1 September 2015; is that about right?

2 A. Yeah, that sounds right.

3 Q. If you look at the bottom of
4 page 1, Professor Rose reports -- and she puts
5 it in bold. "It has been well documented that
6 when one changes the source water, one can
7 change the quality of the finished water at the
8 tap due to the chemical, biological, and
9 physical conditions of the distribution system."

10 Do you see that?

11 A. Yes.

12 Q. That's something that the city of
13 Flint knew prior to April of 2014, correct?

14 MR. KIM: Objection as to
15 foundation.

16 MR. MARKER: I'll join.

17 A. Yeah. I don't -- I will say the
18 information is out there. Whether the city of
19 Flint knew it --

20 Q. Well, how about you? You knew
21 that, didn't you?

22 A. We had an idea.

23 Q. If you change the raw water
24 source, stuff can happen, right?

1 A. Things can change, yep.

2 Q. It was not a secret, was it?

3 A. No.

4 Q. And was it something that was
5 discussed with Busch, Prysby, Cook,
6 Shekter-Smith, and professional engineers at DEQ
7 before the switch in April of 2014?

8 MS. COLLINS: Objection; form
9 foundation.

10 A. Not that I can recall.

11 Q. And if you look at the bottom of
12 page 3, she has the numbered paragraph 3, headed
13 "What water quality testing should be done?"

14 Do you see that? Page 3. It's
15 not a number. You have to --

16 A. Okay. Yep.

17 Q. Way down at the bottom.

18 A. Uh-huh.

19 Q. "What water quality testing should
20 be done?"

21 Do you see that?

22 A. Yes.

23 Q. And then if you look at the bottom
24 paragraph, it reads, "The water testing in Flint

1 needs to be diagnostic, not focused on a
2 regulatory goal. This means more extensive
3 testing is needed to identify the issues and
4 problems.

5 "I stated in an e-mail January 22,
6 2015 to Mr. Howard Croft, the mayor, and other
7 officials 'I definitely think more testing for
8 hardness, iron, TDS, E. coli, maybe lead from
9 people who are having aesthetic issues is
10 needed.'

11 "Added to this list would be
12 corrosivity, heterotopic bacteria, and
13 Legionella."

14 Do you see that?

15 A. Yes.

16 Q. Was there ever a discussion of the
17 task forces about Dr. Rose's recommendation for
18 additional testing as she described it in
19 January and then again in October?

20 A. Not that I can recall.

21 Q. So that recommendation was just
22 essentially ignored? It fell through the
23 cracks?

24 MR. MARKER: Objection; form,

1 foundation.

2 A. It never made it to me, I can tell
3 you that.

4 Q. Did you come to know that by
5 February 9 of 2015, the Environmental Protection
6 Agency had been contacted by the White House
7 about Flint drinking water problems? Let me
8 restate that.

9 Did you come to know in February
10 of 2015 that the White House, the President of
11 the United States, was expressing concern about
12 the drinking water problem in Flint, Michigan?

13 A. I do not recall. I don't recall
14 that.

15 Q. Do you have the exhibit showing
16 the LeeAnne Walters' analysis, February 24,
17 2015?

18 MR. MARKER: It's an e-mail; is
19 that right?

20 MR. CAMPBELL: Yeah, it's an
21 e-mail string.

22 MR. MARKER: Number 10?

23 MR. CAMPBELL: That's probably it.

24

1 BY MR. CAMPBELL:

2 Q. Can you -- you have Exhibit 10 in
3 front of you, and it references 2128 Browning
4 Avenue. That's LeeAnne Walters' house?

5 A. Correct. Yes.

6 Q. Okay. Can you tell us how she
7 came in contact with you?

8 A. Yeah. She had been calling -- I
9 believe she had been in contact with Mr. Croft a
10 couple times in regards to discoloration in her
11 water.

12 So Mr. Croft finally called me
13 about that. So I made myself available to go
14 see Ms. Walters and take samples from her house
15 and try to determine what her issue was.

16 Q. How many times did you go to her
17 house?

18 A. Oh, probably a good half dozen at
19 least. I got to know her and her family pretty
20 well.

21 Q. She had a couple of young kids?

22 A. Yes. Yep, two young boys.

23 Q. At least one of whom ultimately
24 who suffered some physical injuries that she

1 alleges were connected to the drinking water?

2 A. Correct.

3 Q. That's something you came to learn
4 about through her communications?

5 A. Yes.

6 Q. But in any event, LeeAnne Walters
7 was evidently concerned about her drinking water
8 sufficiently to ask for help from the city of
9 Flint, right?

10 A. Correct. Yep.

11 Q. Do you know that she also asked
12 for help from the Environmental Protection
13 Agency?

14 A. Yes, I do know that.

15 Q. Did you know that she was asking
16 for help from the Environmental Protection
17 Agency at the same time that she was asking for
18 help from the city of Flint?

19 A. Yes, I did.

20 Q. That wasn't unreasonable of her to
21 ask for help, was it?

22 A. No, I don't think so.

23 Q. It wasn't unreasonable of her to
24 be concerned about the physical well-being of

1 her children and herself from drinking water,
2 was it?

3 A. No, not at all.

4 Q. I asked you earlier about the
5 city's and the MDEQ's duty and responsibility to
6 the citizens of Flint about hazards in drinking
7 water.

8 Do you remember that?

9 A. Yes, I do.

10 Q. So when a citizen like LeeAnne
11 Walters expresses concern about the physical
12 well-being of her children and herself from
13 drinking water, is that something that you, the
14 city of Flint, and the MDEQ are duty bound to
15 address; isn't that right?

16 MR. MARKER: Objection; form.

17 MS. COLLINS: Objection; form,
18 foundation.

19 A. And I will say yes. I personally
20 felt like I had a duty to investigate a little.

21 Q. And you did?

22 A. Yes.

23 Q. And your investigation involved
24 multiple tests of her drinking water, correct?

1 A. Correct. Yep.

2 Q. Explain how you performed the
3 tests.

4 A. Well, originally when I went
5 there, it was kind of like a normal I'll say
6 standard operating procedures for myself, or lab
7 staff, that I would send out to a complaint like
8 this, was to test for chlorine and coliform
9 bacteria, something we had easy access to, and
10 our lab was certified for.

11 And in any event of discolored
12 water, a lot of times I would make a call to
13 Mr. Bincsik's crew and "Hey, let's flush some
14 fire hydrants to see if we can get this rusty
15 water out of the way."

16 So when I first met Ms. Walters,
17 she was very worried and concerned. I wanted to
18 try to alleviate that and try to help her as
19 best I could. So we took a few samples out
20 of -- seemed like a toilet tank for different
21 metals. And she just wasn't -- she wasn't sure
22 what could be causing issues with one of her
23 children.

24 So my first -- first, I guess,

1 visit there, like I said, it was kind of the
2 standard operating procedure to get a bacteria
3 sample, try to get a chlorine number. Called
4 Mr. Bincsik to flush the hydrants. Told her I'd
5 be back a few days later to see if anything has
6 changed.

7 So then a second time I went back,
8 still had the issue of rusty water, and that's
9 when I left her with a lead and copper sample
10 bottle. This to me was kind of my first inkling
11 that we could have an issue around here.

12 So I left her with a lead and
13 copper sample bottle, DEQ instructions how to
14 collect the sample, and told her to call me the
15 next day when the sample is ready, and I'll send
16 it to the lab.

17 So I did that. Took a day or two
18 to get the results back. Might have taken three
19 or four days. I can't really remember.

20 As soon as I got the results back.
21 I seen that 104 part per billion level. So I
22 immediately called Ms. Walters. Told her to
23 make sure the kids aren't drinking any of the
24 water.

1 Q. Why did you tell her that?

2 A. Well, that's a -- that's a high
3 level of lead in the water.

4 Q. Because you recognized it as a
5 potential cause of serious injury to children?

6 A. Absolutely, yeah.

7 Q. So you felt compelled --

8 A. Absolutely.

9 Q. -- to inform her of that hazard,
10 right?

11 A. Yes, right away. Yep. So as a
12 follow up, I told her I wanted to take another
13 sample, because I've never seen a level this
14 high in all the samples that had been collected
15 in the city, so -- also, we did a walk-through
16 through her house.

17 You know, usually you do a little
18 bit of investigation to what type of piping they
19 have, if they have filters on their lines.

20 Q. One of the things you observed
21 about the inspection of her house was that she
22 had all new plumbing fixtures in her house?

23 A. Yeah, it was all new plumbing
24 fixtures.

1 Q. And all of the internal plumbing
2 was PVC, right?

3 A. It was plastic, correct. Yes.

4 Q. So you made reference to the fact
5 that she had a water filter system?

6 A. Yes.

7 Q. Where was that connected, and what
8 was it?

9 A. It was just a simple filter to
10 remove iron.

11 Q. At the tap?

12 A. No. It was in her basement, not
13 far from where the waterline come into her
14 house. So she had showed me that.

15 Q. Did she make -- did she tell you
16 that she was continuously finding the need to
17 repair -- replace or clean the filter?

18 A. Yes. She was having to clean it
19 very frequently in just a couple of days,
20 sometimes not even a day.

21 Q. What did you take from that?

22 A. Well, there's a lot of rust coming
23 in that line from somewhere. So I'm immediately
24 starting to lean towards her service line as the

1 issue.

2 Q. So you took it to mean that the
3 filter was clogging with sediment --

4 A. Yes.

5 Q. -- flowing in from raw water --
6 from water?

7 A. Correct. Yes. And it was looking
8 to me like iron, like rust, like we're seen
9 before in parts of the city. So I knew it
10 wasn't coming from inside her house.

11 Q. Did you come to learn that
12 eventually she had water samples taken from her
13 house after the filtration system was removed?

14 A. I'm sorry. Could you say that
15 again?

16 Q. Sure. You took a -- you took a
17 sample from her, found a result of 104 parts per
18 billion. The system had a filtration system on
19 it at the time that you took the sample, right?

20 A. Correct. Yes.

21 Q. You didn't disassemble that?

22 A. Well, that was the time -- yeah,
23 because I didn't take the sample. She had to
24 take the sample herself following with the rules

1 of taking lead and copper samples, but yeah, she
2 had --

3 Q. So your belief -- your assumption
4 is that the filtration system was in place when
5 she took that sample?

6 A. When she took that original one,
7 yeah.

8 Q. Okay. So despite the presence of
9 the filtration system, the lead result was over
10 the moon? It was huge?

11 A. Yes.

12 Q. Did you ever come to learn that
13 additional tests were taken from her house, from
14 her water without the filtration system in
15 place?

16 A. Yes.

17 Q. Did you come to learn that the
18 lead results were even higher?

19 A. Yes.

20 Q. So you took another test and got a
21 result of 397 parts per billion?

22 A. Correct.

23 Q. Was that with or without a
24 filtration system?

1 A. I believe I told her to take that
2 without, but it's kind of hard for me to
3 remember now.

4 Q. And then I think I mentioned to
5 you before that later test results showed lead
6 over 700 part per billion, and one taken by the
7 EPA over 13,000 parts per billion.

8 Do you remember that? Do you
9 remember learning about that?

10 A. Yes, I do.

11 Q. Okay. So eventually in the summer
12 when you're going to undertake monitoring,
13 you're going to produce results of monitoring
14 for lead and copper at the instruction of the
15 DEQ, you were told by Mr. Busch and Mr. Prysby
16 to remove the LeeAnne Walters' test results,
17 weren't you?

18 MS. COLLINS: Objection; form and
19 foundation.

20 A. Yes. The original one of 104,
21 yes.

22 Q. Okay. Did that kind of raise an
23 eyebrow with you?

24 A. A little bit, it did. But then,

1 again, I did know in the Lead and Copper Rules
2 that there's not supposed to be a point of use
3 filter or any filter on the system.

4 Q. Well, that's what I'm getting to.
5 I can envision a regulator saying, "Don't
6 utilize test results for lead and copper on a
7 system that has a filter, because the lead and
8 copper results might be lower than you otherwise
9 would get if there were no filter." Right?

10 A. Correct.

11 MS. COLLINS: Objection; form.

12 MR. KUHL: Objection to form and
13 foundation.

14 Q. Here you've got a filter in place
15 and the lead results are way out of whack. Why
16 would you not include that in your lead and
17 copper test results or monitoring test results?

18 MR. KUHL: Objection to form and
19 foundation.

20 MR. MARKER: I'll join.

21 A. I included it with my report when
22 I sent it.

23 Q. Yeah, but Prysby and Busch nixed
24 it, right?

1 MR. KUHL: Objection to form.

2 MS. COLLINS: Objection to
3 foundation.

4 A. On a conference call a few days
5 after that report was submitted, they asked me
6 to remove that and one other number.

7 Q. So it doesn't make sense, does it,
8 Mr. Glasgow, to eliminate a lead and copper test
9 result that is extremely high despite the
10 presence of a filter? It suggests a significant
11 problem, doesn't it?

12 MR. KUHL: Objection to form.

13 A. It did in my eyes, yes.

14 Q. Okay. And you made your views
15 known to Mr. Busch and Mr. Prysby?

16 A. Yes.

17 Q. Your views were not followed,
18 correct?

19 A. I don't believe so.

20 - - -

21 (Glasgow Deposition Exhibit 20 marked.)

22 - - -

23 MS. DEVINE: 4-15-2016 SOM0007015.

24

1 BY MR. CAMPBELL:

2 Q. Have you had a chance to look at
3 it?

4 A. Yeah, I've glanced at it.

5 Q. If you look from the back to the
6 front, you'll see that the document includes
7 some e-mails that you sent to LeeAnne Walters.
8 She then forwarded those e-mails to the
9 Environmental Protection Agency, Jennifer
10 Crooks.

11 Do you see that?

12 A. Okay.

13 Q. And then Jennifer Crooks forwarded
14 that information on to Mr. Busch and Mr. Prysby,
15 with copies to her colleagues, Tom Poy and
16 Miguel Del Toral.

17 Do you see that?

18 A. Yes.

19 Q. And eventually you met or spoke
20 with Miguel Del Toral, didn't you?

21 A. Yes, I did. I spoke with him
22 early on, not long after meetings Ms. Walters.

23 Q. Okay. So it appears from this
24 exchange of information that no later than

1 February of 2015, the EPA, the MDEQ, and the
2 city of Flint were aware of very significant
3 lead findings in LeeAnne Walters' house, no
4 later than that, right?

5 A. Correct. Yep.

6 Q. If you turn to the second page.
7 There's an e-mail from Jennifer Crooks to Busch
8 and Prysby where she's informing Mr. Busch and
9 Mr. Prysby about the lead findings at LeeAnne
10 Walters' house. She references you and she
11 references black sediment in her water.

12 Do you see that?

13 A. Yes.

14 Q. And she states -- well, first of
15 all, she gives you kudos for doing the job that
16 you did.

17 Do you see that?

18 A. I do.

19 Q. Then she goes on to say, "The iron
20 levels were so high, they were at the highest
21 levels that the equipment would record."

22 Do you see that?

23 A. Yes.

24 Q. And then she says, "Wow. Did

1 he -- meaning you -- did he find lead. 104

2 parts per billion. She has two children under
3 the age of three. Big worries here."

4 Do you see that?

5 A. Yes.

6 Q. And then next paragraph, she
7 references a conversation with Steve Busch where
8 they were talking about the different chemistry
9 in the water as leaching out contaminants from
10 inside of the biofilms inside the pipes.

11 Do you see that?

12 A. Yes.

13 Q. And then she references in the
14 last paragraph Professor Rose at Michigan State.

15 Do you see that?

16 A. Yes, I do.

17 Q. Now, that then leads me to the
18 last e-mail in sequence where Crooks is sending
19 along to Mr. Prysby, Mr. Busch, Mr. Rosenthal
20 with copies to Miguel Del Toral and Tom Poy
21 observations that Mr. Del Toral made in
22 reference to this communication. And I'm
23 referencing the third paragraph down.

24 Do you see that? Do you see the

1 reference to his name?

2 A. Yes.

3 Q. And she reports that Del Toral
4 told her that "High levels of iron usually bring
5 high levels of lead. The large amount of black
6 sediment at Mrs. Walters' home is most likely
7 particulate lead that" -- she goes on to say the
8 lead actually bonds to the iron sediment and
9 that that -- those particulates are usually very
10 highly concentrated with lead up to 95 percent
11 lead.

12 Do you see that?

13 A. I do, yes.

14 Q. Then he raises the question
15 through Jennifer Crooks of what Flint was doing
16 by way of optimal corrosion control.

17 "Flint must have optimal corrosion
18 control treatment. Is it phosphates or is it pH
19 alkalinity adjustment?"

20 Do you see that?

21 A. Yes.

22 Q. Do you know what the -- do you
23 know what the response to that was? Did you --
24 strike that question.

1 Did you learn that the EPA through
2 Crooks and Del Toral in February began to
3 inquire about the city of Flint's use of optimal
4 corrosion control treatment?

5 A. Yes.

6 Q. You did? You learned about it
7 then? How did you learn?

8 A. A phone call from Miguel Del
9 Toral.

10 Q. So he called you directly?

11 A. Yes.

12 Q. What did he say to you?

13 A. He just asked me if we were adding
14 any phosphates to the water.

15 Q. And you said no?

16 A. I said no.

17 Q. And what did he say?

18 A. He was a little shocked.

19 Q. Like "Holy Moly" --

20 A. Yeah.

21 Q. -- or words to that effect?

22 A. He told me he was coming in town
23 to do some sampling of his own after that at
24 Ms. Walters' house.

1 Q. All right.

2 - - -

3 (Glasgow Deposition Exhibit 21 marked.)

4 - - -

5 MS. DEVINE: This is

6 VATECH-00064173.

7 BY MR. CAMPBELL:

8 Q. I'm only going to ask you about
9 the first e-mail by Mr. Del Toral. It goes over
10 to like the first line on the second page.

11 Have you had a chance to look at
12 it now?

13 A. Yep.

14 Q. This is an e-mail from Del Toral
15 to Jennifer Crooks, but also to Mike Prysby,
16 Steve Busch, Adam Rosenthal, and then some of
17 his colleagues, Tom Poy, Michael Schock, and
18 Andrea Porter.

19 Do you see that?

20 A. Yes.

21 Q. And he addresses the chemical or
22 mechanical relationship between corrosion or
23 rusting and absorption of lead in the main
24 paragraph.

1 But if you look down at the bottom
2 of the first page, Del Toral raises the
3 question, "If I remember correctly, Detroit is
4 feeding PO4" -- that's orthophosphate?

5 A. Yeah, correct.

6 Q. -- "for the Lead and Copper Rule,
7 but since Flint is no longer part of that
8 interconnection, I was wondering what their
9 optimal corrosion control treatment was.

10 "They are required to have optimal
11 corrosion control treatment in place which is
12 why I was asking what they are using."

13 And then in the next page, he
14 makes reference to Michael Schock who is the
15 EPA's expert on lead and lead and copper. And
16 suggests that the people contact Michael Schock.

17 This is -- we're still in February
18 of 2015. From this e-mail, he is inquiring
19 about optimal corrosion control treatment, which
20 he says is required by federal law. And then he
21 suggests, "Let's get an expert in here, Michael
22 Schock, to assist with the evaluation of the
23 lead."

24 Do you see that?

1 A. Yes.

2 Q. Were you provided a copy of this?

3 Did you see a copy of this?

4 A. No, I did not see a copy of this.

5 Q. Is this the first time you've ever
6 seen this?

7 A. First time I've seen it.

8 - - -

9 (Glasgow Deposition Exhibit 22 marked.)

10 - - -

11 MS. DEVINE: October 7, 2019

12 EGLE0126915.

13 BY MR. CAMPBELL:

14 Q. This is another long e-mail string
15 that includes some of the e-mails that I just
16 showed you.

17 So if you could concentrate on
18 just the first two on pages -- the first page
19 and roll over to the top half of the second
20 page, that would be good.

21 A. Okay.

22 Q. Had a chance to look at it?

23 A. Yeah.

24 Q. The first e-mail from Crooks to

1 Busch and -- to Stephen Busch with copies to
2 others, including Prysby and Rosenthal and
3 Mr. Del Toral, contains an explanation again of
4 the chemistry and mechanics of how lead absorbs
5 onto metallic particles.

6 Do you see that?

7 A. Yes.

8 Q. But I really want to address the
9 next paragraph down. Mr. Busch, Stephen Busch,
10 on February 27 responds to Miguel Del Toral and
11 to Jennifer Crooks providing -- purporting to
12 provide the information that they requested.

13 Do you see that?

14 A. Yes.

15 Q. In it, he says, "The city of
16 Flint" -- and if you look at the third bullet
17 point down -- "has an optimized corrosion
18 control program."

19 Do you see that?

20 A. Yes.

21 Q. You didn't have an optimized
22 corrosion control program at all, did you?

23 MR. KUHL: Objection to form and
24 foundation.

1 A. Not to my understanding.

2 Q. Well, you certainly -- you
3 certainly didn't have optimized corrosion
4 control treatment?

5 MR. KUHL: Objection to form and
6 foundation.

7 Q. Correct?

8 A. Correct.

9 Q. Do you know -- were you consulted
10 by Mr. Busch about this response?

11 A. Not that I recall.

12 Q. Do you have any knowledge as to
13 why Mr. Busch would throw a curve ball at Crooks
14 and Del Toral with this kind of information?

15 MR. KUHL: Objection to form.

16 MS. COLLINS: Objection to form
17 and speculation.

18 A. No, I do not.

19 Q. You don't know why Mr. Busch would
20 put forth that information which on its face is
21 false, do you?

22 MR. KUHL: Objection to form.

23 A. I do not know why.

24 Q. And this is the first time you've

1 seen this document?

2 A. Correct. Yes.

3 - - -

4 (Glasgow Deposition Exhibit 23 marked.)

5 - - -

6 MR. CAMPBELL: So I'm sorry. My
7 copy of this document doesn't have a
8 Bates number on it, but it's Miguel
9 Del Toral's June 24, 2015 report. All
10 of you have it I'm quite certain.

11 MR. KUHL: State an objection to
12 using this document. It's a draft
13 document, not a final document. I'll
14 object.

15 MR. CAMPBELL: Okey dokey.
16 Whatever you say.

17 MR. KUHL: All right then. We all
18 agree.

19 MR. CAMPBELL: No, I don't agree.
20 Don't take "okey dokey" to mean I agree
21 with anything you say.

22 BY MR. CAMPBELL:

23 Q. Have you had a chance to look
24 at -- I know it's a lengthy like six-page

1 letter.

2 A. Right. Yeah. I've kind of
3 glanced through it here.

4 Q. Did you get a copy of this at some
5 point in time? Did you have a chance to review
6 this at some point in time?

7 A. I believe I have. I don't really
8 remember much.

9 Q. It was publicized by the American
10 Civil Liberties Union back in July -- back in
11 June of 2015 and ultimately was forwarded to
12 Marc Edwards.

13 Do you know whether you would have
14 come in contact with this report?

15 A. I don't know that I would have in
16 that chain of events.

17 Q. All right. So in this report,
18 Mr. Del Toral lays out all of the activity that
19 was undertaken by the EPA with respect to
20 Ms. Walters' house. You'll see that on page 3.

21 And because it's -- it was
22 observed that there were nonmetallic plumbing
23 parts in the house, that couldn't have been a
24 cause for the lead.

1 Do you see that?

2 A. Yes.

3 Q. You ultimately agreed with that,
4 didn't you?

5 A. Yes, I did. Yep.

6 Q. If you look on page 3, the third
7 paragraph down, he makes reference to excavating
8 service lines on May 6.

9 Do you see that?

10 A. Yes.

11 Q. And what he determined -- what
12 they determined by a physical inspection of the
13 service line, that the service line on the
14 owner's side of the stop or valve was galvanized
15 iron, but from the water main to that stop was
16 lead.

17 Do you see that?

18 A. Yes. Yep.

19 Q. And that is consistent with what
20 you later learned to be the case, right?

21 A. Yes.

22 Q. And the way it works out there in
23 the field is that the physical objects from the
24 main to the curb stop, from what's called the

1 corp stop to the curb stop, are the property of
2 the city of Flint, right?

3 A. Correct. Yes.

4 Q. And from the curb stop into the
5 house of the property of the property owner?

6 A. Yes. Correct.

7 Q. So the component that was leaching
8 lead in the context of Ms. Walters' case was a
9 piece of lead piping owned by the city of Flint?

10 A. Correct. Yes.

11 Q. Do you see on page 1, down at the
12 bottom, that Mr. Del Toral writes about a major
13 concern from a public standpoint is the absence
14 of corrosion control treatment in the city of
15 Flint for mitigating lead and copper levels in
16 the drinking water?

17 Do you see that?

18 A. Yes.

19 Q. And that ultimately was confirmed,
20 right?

21 MR. KUHL: Objection; form and
22 foundation.

23 A. I would say so, yes.

24 Q. There's not too much doubt about

1 it, is there?

2 MR. KUHL: Objection to form and
3 foundation.

4 Q. You ended up believing that to be
5 so, correct?

6 A. Yes. Correct.

7 Q. There was a lot of discussion in
8 the criminal court hearing about the Lead and
9 Copper Rule forms that you filled out?

10 A. Yes.

11 Q. Sort of a two-, three-, or
12 four-page form on the front -- on the first part
13 of which you were asked a question and had to
14 fill out a question as to whether or not all the
15 sites were Tier 1 sites, and you answered no?

16 A. Correct. Yes.

17 Q. And then on the following pages,
18 you identified addressees of where the lead and
19 copper tests or sampling was done, and as to
20 each, you identified the plumbing as -- or the
21 service line as lead.

22 Do you remember that?

23 A. Yes. Yep.

24 Q. That had -- those responses had no

1 basis in fact, correct?

2 MR. MARKER: Objection; form,
3 foundation.

4 A. I did not have the information
5 necessary to verify all that.

6 Q. And the whole point of that form
7 was to provide verifiable information to the
8 MDEQ, correct?

9 MR. MARKER: Objection; form,
10 foundation.

11 A. I would say yes.

12 Q. Okay. I gather you assumed that
13 the MDEQ, which was responsible for reviewing
14 those forms, would see the contradiction in
15 terms between page 1 and the back pages, right?

16 A. Correct. Yes.

17 Q. That was your assumption?

18 A. Correct. Yes.

19 Q. Was the first time that anybody
20 from the MDEQ raised with you that contradiction
21 in July of 2000- -- July 10th of 2015?

22 A. I believe that issue might have
23 been raised earlier than that with Mr. Prysby.

24 Q. Give me a date.

1 A. I'm going to say somewhere around
2 the LeeAnne Walters' time frame.

3 Q. Whoa. Back in February and March
4 of 2015?

5 A. Yes.

6 Q. Tell us -- I haven't seen those
7 documents. Tell us about how that came about.

8 A. Yeah, I'm trying to think. I
9 think that was when I first notified -- or
10 Mr. Prysby asked me a question in regards to our
11 standard list of -- pulled list of samples for
12 lead and copper monitoring, and asked me if
13 Ms. Walters was on that.

14 And I said no, but now after her
15 results, that I was going to go look for the
16 problem areas and take samples from there so I
17 could really get an idea of what's going on.

18 Q. How did that exchange lead you to
19 believe that Prysby was aware of the
20 contradiction between how you had filled out
21 page 1 of the form and the ultimate -- and the
22 follow-on pages. Explain that to us.

23 A. I just think in the midst of
24 conversation, I know I had reiterated to him the

1 records, and the pulled list was not at my
2 disposal. I had asked my supervisors for a list
3 back in early '14, knowing that we had to do
4 increased number of samples.

5 So I reiterated that to
6 Mr. Johnson, Mr. Croft, and never received any
7 list of pulled addresses.

8 So that's when I took it upon
9 myself just to collect samples wherever we could
10 get them. Mr. Bincsik assured me, you know,
11 80 percent of the service lines are lead. So
12 throw a dart, and you should be able to find
13 your spots.

14 Q. It turns out that that's not so,
15 though, right?

16 A. Yep. Absolutely.

17 Q. It turns out less than 30 percent
18 of the service lines are lead in Flint, right?

19 MR. KIM: Objection as to form and
20 foundation.

21 Q. You've learned that through the
22 Fast program?

23 MR. KIM: Object to form and
24 foundation.

1 A. Well, yeah. I've been off for a
2 long time, so I've been not privy to all that
3 info.

4 Q. In any event, the data on Lead and
5 Copper Rule reporting is unreliable, correct?

6 MR. MARKER: Objection; form and
7 foundation.

8 MR. KUHL: Objection; form and
9 foundation.

10 A. I'll have to say correct.

11 Q. If you can't identify the source
12 as a Tier 1 source, by definition that report is
13 of no consequence, right?

14 MR. KUHL: Objection to form.

15 MR. MARKER: I'll join.

16 A. Correct.

17 Q. What did Prysby do or say when you
18 confronted him with the fact that the data was
19 non-verifiable?

20 A. It seems like he said, you know,
21 he'd talk with Busch, and they would discuss
22 this and get back with me.

23 Q. Okay. Was it Busch and Prysby in
24 the summer, in July of 2015, who decided that

1 the number of samples that you were to collect
2 could be reduced from 100 to something less than
3 100 to 60?

4 A. Yes, I believe so.

5 Q. Whose decision was that?

6 A. I believe it was a combo of
7 Mr. Busch, Mr. Prysby, and Mr. Rosenthal might
8 have been in on that as well.

9 Q. But not you?

10 A. No, not me. No.

11 Q. And they lowered the number of
12 samples in part because you were having trouble
13 getting samples, right?

14 MS. COLLINS: Objection; form and
15 foundation.

16 MR. KIM: Objection; form.

17 A. Yeah, I'd send them an e-mail
18 saying that I was having problems getting
19 samples. I assumed the city would be getting a
20 violation for not monitoring, getting the
21 correct number of samples, and I was asking what
22 we do from that point.

23 Q. And then lickety-split, now you
24 only have to get 60 samples?

1 MS. COLLINS: Objection to form.

2 MR. KUHL: Object to form.

3 A. Correct. The number was reduced.

4 Instead of 100, it went down to -- it might have
5 70. I can't recall if it was 60 or 70.

6 Q. I think it was 60. But it doesn't
7 matter. They reduced the number of samples and,
8 therefore, you were in compliance?

9 A. Correct.

10 Q. By August of 2015, and certainly
11 by September of 2015, the MDEQ had announced to
12 the city of Flint, to you, that lo and behold,
13 you needed optimized corrosion control
14 treatment?

15 A. Correct. Yes.

16 Q. And funny thing, they said it
17 should be orthophosphate, right?

18 MR. KUHL: Objection; form.

19 A. Correct. Yes.

20 Q. And they said, what, put it in
21 place immediately, right?

22 A. Yes. As soon as possible, yep.

23 Q. Did you have any conversation with
24 them about that?

1 A. I don't believe I physically had
2 any conversation with them.

3 Q. Do you know whether that change in
4 view was driven in part by the EPA activity and
5 questioning that was ongoing from February up
6 through July?

7 MR. KIM: Objection as to
8 foundation.

9 A. Yeah. I could make my own
10 assumptions, yes.

11 MR. MARKER: We don't want you to
12 make assumptions here today.

13 THE WITNESS: Okay.

14 BY MR. CAMPBELL:

15 Q. Did you -- I think I asked you
16 whether you were interviewed by the governor's
17 task force. It's called the Flint water
18 advisory task force.

19 A. Yes.

20 Q. And you are listed in there as one
21 of the persons who was interviewed.

22 A. Yes.

23 Q. You remember being interviewed for
24 that?

1 A. Yes.

2 Q. And were you forthright and direct
3 with the members of the task force to tell them
4 what you knew?

5 A. Yes.

6 Q. Did you tell them the same kind of
7 information that you testified to in the
8 criminal court against -- in the action against
9 Busch and Prysby and Shekter-Smith?

10 A. Yes. I believe so, yes.

11 Q. And you told them the same kind of
12 information you've been telling us here today?

13 A. Yes.

14 Q. Have you read the governor's task
15 force report?

16 A. No, I don't believe I ever did.

17 Q. Never read it? Never learned what
18 the findings were?

19 A. Not that I recall, no.

20 MR. CAMPBELL: Okay. I'm going to
21 pass the witness, and I have -- I'm
22 reserving the last half hour of my time.

23 MS. DEVINE: We can figure out the
24 exact time when we go off the record.

1 MR. CAMPBELL: Who's up next?

2 MR. MARKER: We're off the record.

3 THE VIDEOGRAPHER: We're going off
4 the record at 12:25 p.m.

5 - - -

6 Thereupon, at 12:25 p.m. a lunch
7 recess was taken until 1:13 p.m.

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1 Monday Afternoon Session
February 24, 2020
2 1:13 p.m.

3 - - -

4 THE VIDEOGRAPHER: We are back on
5 the record at 1:13 p.m.

6 - - -

7 EXAMINATION

8 BY MR. GAMBLE:

9 Q. Mr. Glasgow, good afternoon.

10 A. Good afternoon.

11 Q. My name is Travis Gamble. I
12 represent one of the other Defendants in this
13 case.

14 You understand that?

15 A. Yes.

16 Q. I've got a number of questions for
17 you. I may jump around a little bit.

18 But you testified earlier that you
19 were employed initially in 2005 as an operator
20 at the Flint water treatment plant, correct?

21 A. Yes.

22 Q. And you held that position until
23 2015, correct?

24 A. Correct. Yeah.

1 Q. And were you stationed at the
2 water treatment plant continuously during that
3 ten-year period of time?

4 A. Yes, I was.

5 Q. So you weren't working anywhere
6 else with the city of Flint at any other plant?

7 A. No.

8 Q. During your tenure, that
9 ten-year -- well, strike that.

10 Between 2005 and 2013, when the
11 decision was made by the city of Flint to
12 actually utilize the Flint River as a potential
13 water source, were you familiar with any studies
14 that had been completed evaluating water
15 treatment options using the Flint River as a
16 water source?

17 A. No, not that I can recall.

18 Q. Were you familiar with any studies
19 that evaluated the KWA as a potential water
20 source?

21 A. No, I wasn't really familiar with
22 any studies. I had heard, you know, that
23 studies were being done for the KWA pipeline,
24 but I wasn't really involved.

1 Q. I'm going to show you what has
2 previously been marked as Brent Wright Exhibit
3 38. And I'll represent to you that this is a
4 2009 study that was done to evaluate the
5 potential for utilizing the KWA as a new water
6 source for the city of Flint.

7 A. Okay.

8 Q. Have you ever seen that report
9 before?

10 A. I have seen it. I haven't really
11 looked through it much.

12 Q. Do you have any recollection as to
13 whether there were recommendations or
14 suggestions as to how to treat the water that
15 would be ultimately or potentially coming from
16 the KWA?

17 A. No, I can't say I remember
18 discussing any of that.

19 Q. So you have no understanding of
20 whether there was any inclination or any
21 suggestion or recommendation to utilize
22 orthophosphates as a type of corrosion control?

23 A. Correct, yeah.

24 Q. And you have no idea what the

1 recommendations were, suggestions were, as far
2 as softening?

3 A. No.

4 Q. And you don't know whether they
5 were recommending lime softening?

6 A. Correct.

7 Q. And you don't know whether they
8 were also recommending soda ash?

9 A. Correct.

10 Q. I'm going to show you what has
11 been marked as Defendants' -- this was Exhibit 1
12 to Ed Kurtz's deposition. And it's another
13 study that was done in July of 2011.

14 Have you ever seen that study
15 before?

16 A. I can't say that I have. Let's
17 see here.

18 MR. MARKER: Which exhibit number
19 was it?

20 MR. GAMBLE: It's Exhibit 1 for Ed
21 Kurtz.

22 MR. MARKER: Okay. So it's back
23 here. Right there.

24 Q. And I'll represent to you this is

1 a study that was completed by Rowe Engineering
2 as an evaluation or analysis of the Flint River
3 as a potential permanent water supply for the
4 city of Flint.

5 Do you understand that?

6 A. Yes.

7 Q. And have you ever seen this study
8 before?

9 A. I don't believe I have. I
10 don't -- it doesn't look familiar.

11 Q. Have you ever heard or talked to
12 anybody who referenced the study and what the
13 ultimate recommendations were if the city of
14 Flint were to utilize the Flint River as a
15 continuous water source?

16 A. I can't say that I have.

17 Q. And as you sit here today, you
18 don't know what recommendations were made with
19 regard to what chemicals would be utilized or
20 recommended to treat the Flint River water if it
21 was ever used as a continuous supply?

22 A. No, I do not.

23 Q. You don't know anything about
24 recommendations regarding corrosion control that

1 were also contained within the 2011 report, do
2 you?

3 A. No, I do not.

4 Q. Before I move on, I mentioned
5 before about the studies and recommendations
6 regarding softening, and I think you testified
7 earlier that softening to you was always an
8 aesthetic.

9 A. Yes.

10 Q. Or an aesthetic type of chemical
11 that would deal with the aesthetics of the
12 water, correct?

13 A. Correct, yes.

14 Q. Do you have any understanding as
15 to whether lime itself is a form of corrosion
16 control?

17 A. Not exactly. You know, I've heard
18 some issues to that, but I can't talk in depth
19 about it at all.

20 Q. Do you know whether lime in
21 conjunction with soda ash is a form or can be a
22 form of corrosion control?

23 A. I can say I do not.

24 Q. But I think you testified earlier,

1 when you were operating the plant, you were only
2 operating it utilizing lime --

3 A. Correct.

4 Q. -- for softening, correct?

5 A. Correct, yes.

6 Q. You didn't have soda ash feeders
7 that were up and running, did you?

8 A. No, we did not.

9 Q. Do you know whether there were
10 recommendations made by LAN or others that the
11 city utilize full softening with both lime and
12 soda ash?

13 A. I do not recall any.

14 Q. Did you always believe -- well,
15 strike that.

16 When did you come to learn that
17 the city of Flint was considering switching
18 water sources to the KWA from Detroit water?

19 A. I heard -- I don't want to say
20 rumors. I heard talk, you know, inner-city talk
21 that -- I knew Mr. Wright from the Genesee
22 County Drain Commission was -- they had done a
23 study on the KWA or, you know, they were looking
24 at avenues to bring raw water from Lake Huron

1 over, but --

2 Q. And do you generally recall a
3 date?

4 A. No. I'm going to say maybe 2010,
5 2011 time frame.

6 Q. Okay. Did you have any
7 discussions or was there any discussions amongst
8 yourself and others with the city of Flint as to
9 how you would potentially treat the Flint River
10 water? And when I say "treat," I'm referencing
11 what specific --

12 A. What chemicals.

13 Q. -- chemicals would be utilized to
14 treat it.

15 A. Yeah, and I don't recall any at
16 that time.

17 Q. You don't recall any discussions
18 about corrosion control?

19 A. No. No, I do not, not at that
20 time, no.

21 Q. Were you involved at all in the
22 decision to switch water sources from the KWA --
23 or from DWSD to KWA?

24 A. No, not whatsoever.

1 Q. And by reference, the switchover,
2 the ultimate decision, was made by who?

3 A. From the switch to Detroit to
4 Flint River water?

5 Q. Correct.

6 A. I don't know if it was emergency
7 managers or our DPW director Howard Croft. I
8 can't say who made that final decision.

9 Q. You don't know whether Ed Kurtz
10 made that decision or not?

11 A. No, I can't say.

12 Q. But you weren't involved in that
13 decision-making process, were you?

14 A. No, no. Prior to -- at this time
15 and prior to this, I didn't have my F-1 license.
16 I wasn't kind of the operator in control of the
17 plant, so I wasn't privy to a lot of these
18 talks.

19 Q. When did you receive your F-1
20 license?

21 A. I believe it was '11 or '12.
22 Sometime in this time frame, pretty close.

23 Q. And do you recall specifically
24 when it was announced to you formally that the

1 city of Flint and the Flint water treatment
2 plant were going to switch from Detroit water to
3 KWA with utilization of the Flint River on an
4 interim basis?

5 A. Yeah. That would probably be
6 around the '13 -- early 2013 time frame.

7 Q. When you heard that the city of
8 Flint was going to switch water sources, what
9 was your reaction to that?

10 A. My initial reaction to the switch
11 to KWA, that didn't really bother me. I looked
12 at that as a positive for the city. Now,
13 running out of the river in the interim seemed
14 like a waste to me, to be honest with you. I
15 would rather use the time to prepare staff and
16 people to be ready for the KWA water.

17 Q. Why did you think that utilization
18 or switching over to the KWA was a good thing
19 for the city?

20 A. Just kind of financial
21 independence from -- I had some exposure to the
22 bills we'd get from the city of Detroit, had
23 heard talk from supervisors and others how we
24 could treat water a lot cheaper than we could

1 buy it.

2 Q. Do you know whether there were
3 ongoing discussions amongst the city of Flint as
4 to how they were going to treat the water from
5 the Flint River in the interim basis between
6 2014 when the startup occurred and ultimate
7 connection to the KWA?

8 MR. KIM: Objection to form.

9 A. I would say a little bit of
10 discussion. Nothing really seemed set in stone,
11 so to speak.

12 Q. What discussions do you recall?

13 A. I just recall basically kind of
14 operating the plant as we had on our standby
15 basis except with softening being involved.
16 Softening wasn't always involved with our test
17 runs prior to full-time operation. But it
18 didn't seem like there was going to be -- yeah,
19 there wasn't too many in-depth talks about major
20 changes in the treatment compared to what we had
21 done prior for test runs.

22 Q. Who do you recall having these
23 discussions with?

24 A. Probably, I will say, Mr. Wright,

1 Brent Wright, at the water plant there.

2 Possibly Mr. Johnson. Maybe Mr. Croft as well.

3 And that's all I can really recall.

4 Q. Do you recall when these
5 discussions occurred?

6 A. It probably would have been
7 early -- early to mid 2013.

8 Q. Would that have been after the
9 decision was made to switch water sources?

10 A. Yeah, I think that was after the
11 fact.

12 MR. KIM: Objection as to form and
13 foundation.

14 Q. Did you have concerns about
15 utilizing the Flint River or treating the Flint
16 River on an interim basis in 2013 when you
17 learned of the proposed switchover?

18 A. Yes, I did.

19 Q. And what were your concerns?

20 A. Main concerns was just the shape
21 of the plant. Like I said, we were a standby
22 plant. We'd run quarterly, but to put something
23 in full service 24/7, I didn't have the staff.

24 And to be honest with you, with

1 the talk of running in the interim until KWA was
2 here, for the longest time I thought that was
3 more of a negotiating plea with DWSD to maybe
4 lower some rates. Because everything else
5 seemed a little too rushed for me to switch and
6 make a bunch of upgrades just to run in the
7 interim instead of just getting prepared for
8 KWA.

9 Q. So it sounds like in the back of
10 your mind you thought this was a negotiating
11 tool basically to maintain receiving water from
12 the DWSD but leveraging them into lowering their
13 prices?

14 A. Right.

15 Q. And did you agree with this
16 negotiating ploy?

17 MR. KIM: Objection as to form.

18 A. I would say no.

19 Q. And why not?

20 A. Well, I didn't get involved in a
21 lot of the politics like that early on or at
22 that time frame. I looked at it as the city
23 made a decision a year or two prior to go to
24 KWA. I thought that should be our focus, one

1 thing at a time.

2 Q. Shifting your attention to once
3 the decision was made to switch water sources in
4 2013, did you have any role in contacting LAN
5 about potentially doing some work on the
6 project?

7 A. Myself, no.

8 Q. And when I say "LAN," I'm
9 referring to Lockwood, Andrews & Newnam.

10 Do you understand that?

11 A. I do understand that.

12 Q. Okay. Then I'll just refer to
13 them, for the sake as brevity, as LAN
14 throughout, okay?

15 A. Yep, that's fine. I'll know.

16 Q. Do you know who contacted LAN
17 about potentially doing work on the Flint water
18 treatment plant?

19 A. I'm not sure. It would have
20 either been Mr. Wright, Mr. Johnson, or
21 Mr. Croft. I personally knew LAN had been in
22 the city before and done some upgrades on the
23 plant late '90s, early 2000s. And that was even
24 before I was hired with the city, but I had

1 heard, you know, just through the grapevine. I
2 knew they had been around before.

3 Q. Were you familiar with LAN in 2013
4 when the switchover was announced?

5 A. Yes. Yes, I was then.

6 Q. And did you regularly contact or
7 have contact with LAN or any employees of LAN
8 about the Flint water treatment plant before the
9 switchover was announced in 2013?

10 A. Yes. I'll say Mr. Green and --
11 I'm missing the last name. Jeff was another
12 individual. I know he's on a list here, but
13 yeah, a couple individuals, and Mr. Samir Matta
14 was around as well.

15 Q. And that would be Jeff Hansen?

16 A. Hansen, yes.

17 Q. And what was your interaction with
18 him prior to 2013?

19 A. Prior to 2013, I didn't have a lot
20 of interaction with him, not that I can recall.

21 Q. It's fair to say that your
22 interactions increased in 2013 once the
23 switchover was announced and once there was
24 going to be a project upgrade or basically

1 retrofit the Flint water treatment plant?

2 A. Yes, that's a good statement.

3 Q. Did you attend any meetings with
4 LAN prior to June of 2014 to discuss their
5 potential role and potential scope of work on
6 the Flint water treatment plant?

7 A. Possibly. Most likely I was
8 involved in one or two. I can't say I recollect
9 very well.

10 Q. Do you have any recollection of
11 what the scope of work was generally going to be
12 for LAN? And this is prior to June of 2014.

13 A. Prior to June of 2014.

14 MR. THOMPSON: You mean 2013?

15 Q. Oh, 2013, pardon me.

16 A. Yes, I can't say that I am ...

17 Q. Do you recall ever meeting with
18 LAN and others with the city of Flint to discuss
19 how the water might be treated from the Flint
20 River when it was being utilized in the interim
21 before the KWA?

22 A. I possibly was. Like I said, I
23 can't recollect what the time frames of when I
24 was truly getting more involved. Like I said, I

1 do remember Mr. Green, Mr. Matta, and Mr. Hansen
2 around a lot. The dates that I started being
3 familiar with them, I can't say offhand.

4 Q. It sounds like you don't have a
5 specific recollection of any individual meetings
6 that you would have been present for with LAN or
7 others; is that fair?

8 A. Not offhand, yeah, that's fair to
9 say.

10 Q. Well, I'm going to show you what
11 are meeting minutes that were previously marked
12 as Kurtz Exhibit 7 from a May 22, 2013 meeting
13 with LAN and representatives from the city of
14 Flint.

15 Can you take a look at that
16 briefly.

17 A. Okay.

18 Q. And if you'll see the fourth
19 bullet point down from the meeting notes, it
20 says, "Flint estimates they could save up to
21 \$10 million by running off the Flint River for
22 two years until the KWA system is online versus
23 purchasing water from Detroit."

24 A. Yes.

1 Q. Do you see that?

2 A. Uh-huh.

3 Q. And that was your understanding as
4 of May of 2013, that the switchover would be a
5 basis or a way for the city of Flint to save a
6 lot of money, correct?

7 A. Correct, yes.

8 Q. And, again, I think you said
9 before, you also thought it could have been
10 leverage to try and get Detroit to lower their
11 water prices so you could stay with Detroit
12 water, correct?

13 A. Correct, yes.

14 Q. Did you have -- well, strike that.

15 After -- in May of 2013, did you
16 have any understanding of what LAN's scope of
17 work might be on the Flint water treatment
18 plant?

19 A. No, I really can't say I did, to
20 be honest with you. I knew they were going to
21 be involved, but I never seen a statement of
22 scope of work or anything like that.

23 Q. Did you have any understanding as
24 to whether their work would be with regard to

1 design and retrofitting the Flint water
2 treatment plant as opposed to water treatment
3 decisions or recommendations or
4 responsibilities?

5 MR. MORRISSEY: Objection to form.

6 MR. KIM: Objection as to form and
7 foundation.

8 A. From my personal, I guess,
9 viewpoint, I would say it was more from a
10 retrofit and upgrade capacity.

11 Q. Was it your understanding, just
12 based on the ultimate project, that the city was
13 going to maintain responsibility for water
14 treatment decisions as far as the chemicals, the
15 dosages, and how the water would be treated
16 coming from the Flint River?

17 MR. KIM: Objection as to form.

18 MR. MORRISSEY: Objection to form.

19 A. I would have to answer that yes
20 with, I guess, input from members of LAN and
21 also the state and DEQ.

22 Q. We talked a little bit before
23 about soda ash feed, and I think you testified
24 before that before the Flint water treatment

1 plant was put into full operation during this
2 time period of ramping up or retrofitting it,
3 there were soda ash feeders present in the Flint
4 water treatment plant, correct?

5 A. There was equipment. I had never
6 seen them operate it before.

7 Q. Did you have any understanding of
8 whether LAN's work or recommendations related to
9 the use of full softening? And when I say "full
10 softening," I mean lime and soda ash.

11 A. Lime and soda.

12 I can't say that I do. I don't
13 recall.

14 Q. Whose decision was it to only do
15 lime softening at the Flint water treatment
16 plant when it started up in April of 2014?

17 A. I don't know that I can say whose
18 decision it was.

19 Q. Was that something that was
20 mandated by Steve Busch or Mike Prysby and the
21 DEQ?

22 MR. KUHL: Objection to form and
23 foundation.

24 A. It could have been, but I do not

1 recall who made that decision. Yeah, I just
2 can't recall where that come from originally.

3 Q. Do you recall being present at a
4 meeting in June, June 26 specifically, of 2013
5 with the MDEQ, the city of Flint, LAN, and
6 several other persons and entities to discuss
7 the Flint water treatment plant and ultimately
8 what was going to be done on the project?

9 A. I do believe I was at that
10 meeting, yes.

11 Q. If you would turn to Wright
12 Exhibit 45. And I'll represent to you there has
13 been some confusion or some question about when
14 this meeting took place, whether it was
15 June 26th or 29th.

16 But do you see your name on this
17 Exhibit, Exhibit 45?

18 A. I do, yes.

19 Q. And what date is out beside that?

20 A. It looks like the 26th.

21 Q. So June 26th of 2013?

22 A. Yes.

23 Q. Do you have any specific
24 recollection of this particular meeting?

1 A. To be honest, I really, really
2 don't.

3 Q. So other than looking at the a
4 sign-in sheet, you don't know who else would
5 have been present at the meeting?

6 A. Right, or what fully was
7 discussed, yeah.

8 Q. So you didn't have any
9 recollection or you don't have any recollection
10 of the substance of what was discussed?

11 A. I can't say I do, no.

12 Q. Do you have any recollection as to
13 whether there were discussions about the use of
14 full softening to treat the Flint River water
15 coming out of the Flint water treatment plant?

16 A. I do not recall. Sorry.

17 Q. Do you recall whether there were
18 any conversations about the use of corrosion
19 control and, in particular, phosphates as a form
20 of corrosion control during the June 26th
21 meeting?

22 A. No, I can't say that I do.

23 Q. Do you recall who was leading the
24 meeting?

1 A. I can't even say I recall who was
2 leading the meeting. I'm trying to stimulate
3 the memory here but ...

4 Q. Do you have --

5 A. But I can't.

6 Q. Do you have any recollection of
7 LAN making any recommendations during the
8 June 26th meeting?

9 A. Not offhand. I'm sorry, I do not.

10 Q. And you have no recollection if
11 during this meeting the MDEQ said that they were
12 not going to do or require any type of
13 phosphates or corrosion control at the time of
14 the startup in April of 2014 of the Flint water
15 treatment plant?

16 MR. KUHL: Object to form.

17 MR. MORRISSEY: Object to form.

18 A. Yeah, I don't remember that
19 particularly to this meeting, but I think I
20 stated before, as well, I do remember a meeting
21 with Mr. Prysby stating that. I can't tell you
22 if this was the same meeting or it was a
23 different one.

24 Q. And do you have any recollection

1 of whether the MDEQ took the position that
2 instead of applying corrosion control treatments
3 they would do two rounds -- or two six-month
4 rounds of testing before making those decisions?

5 A. I do recall that, yes.

6 Q. And do you recall whether that was
7 at this meeting or just that's your general
8 recollection but you can't recall specifically
9 when you learned that?

10 A. Yeah, I can't recall specifically.
11 I will say when I did learn that, I do remember
12 Mr. Prysby was in the room and also Mr. Green
13 was. Mr. Green was there from LAN. I don't
14 remember a room full of people, though.

15 Q. As an F-1 operator, you have
16 extensive experience about treating water,
17 correct?

18 A. Correct.

19 Q. You have experience about
20 corrosion control treatments and the types that
21 can be utilized, right?

22 A. Correct. Yes.

23 Q. And you have extensive experience
24 about what they do or how they affect the water

1 quality, correct?

2 A. Correct.

3 Q. Did it cause you any concern when
4 you found out, whether it was at this meeting or
5 some other time, that the MDEQ was not going to
6 require corrosion control treatments when the
7 plant started up in April of 2014?

8 A. It was surprising to me. I had
9 been used to -- even on the Detroit water where
10 there was phosphate in the water, which we'd
11 have to monitor for regularly. So it was a
12 surprise to me that we weren't going to be
13 required to monitor.

14 Q. Did it cause you concern?

15 A. Like I said, it was surprising,
16 but I -- from this big switchover, I had a
17 number of concerns, so I wouldn't say it jumped
18 out as compared to others.

19 Q. Have we already talked about the
20 concerns -- all the concerns you had about the
21 switchover in utilizing Flint River?

22 MR. MARKER: Objection; form,
23 foundation.

24 A. It seems like we have touched on

1 most of what I can remember.

2 Q. As an F-1 operator, do you have
3 familiarity with the Lead and Copper Rule?

4 A. Yes.

5 Q. And do you know what the Lead and
6 Copper Rule requires with regard to corrosion
7 control?

8 A. Yes.

9 Q. And do you believe the Lead and
10 Copper Rule required that corrosion control be
11 utilized in the finished water design when the
12 Flint River went -- or Flint water treatment
13 plant went online in April of 2014?

14 MR. KIM: Objection as to form.

15 MR. KUHL: Objection.

16 MR. MARKER: I'll join.

17 MR. MORRISSEY: Objection.

18 A. Yeah ...

19 MR. MORRISSEY: Stipulate.

20 A. I will -- I will say -- let me
21 have you ask the question again here so I'm
22 not ...

23 MR. GAMBLE: Can you read it back
24 to him.

1 (Record read back as follows:

2 "Question: And do you believe the Lead
3 and Copper Rule required that corrosion
4 control be utilized in the finished
5 water design when the Flint River
6 went -- or Flint water treatment plant
7 went online in April of 2014?")

8 A. No, the Lead and Copper Rule, it's
9 a pretty -- pretty involved rule. It stretches
10 a number of pages through the Safe Drinking
11 Water Act. My initial understanding was I
12 thought it would be required.

13 Q. So you felt that, based on your
14 understanding of the Lead and Copper Rule, that
15 phosphates would be -- or some sort of corrosion
16 control -- optimized corrosion control would be
17 needed, correct?

18 A. Correct, yes.

19 Q. When you found out that the DEQ
20 was not requiring -- it was going to do two
21 rounds of six -- or two six-month rounds of
22 testing, did you agree with that decision?

23 MR. MARKER: Objection; form,
24 foundation.

1 A. I wouldn't say I agreed or
2 disagreed. I kind of was leaving it in the
3 hands of my experts, so to speak. They would
4 direct me where I needed to go.

5 Q. Did you engage in any
6 conversations with anybody with LAN immediately
7 after this meeting on June 26th?

8 A. Not that I can recall.

9 Q. Do you know whether anyone else
10 with the city of Flint had a conversation with
11 Warren Green or anyone else with LAN following
12 the June 26, 2013 meeting?

13 A. I cannot say. I don't recall.

14 Q. And you don't know whether
15 Mr. Green pushed back with the city of Flint and
16 Duffy Johnson about the need to revisit the
17 issue of corrosion control following the June 26
18 meeting?

19 A. No, I cannot say.

20 MR. KUHL: Object to form.

21 MR. KIM: Object to foundation.

22 Q. I think you testified before about
23 LAN's scope of work. Were you involved at all
24 in ultimately deciding what LAN would and would

1 not be doing for the city of Flint on the Flint
2 water treatment plant?

3 A. No --

4 MR. MARKER: Objection.

5 A. -- I was not.

6 Q. Were you involved in any meetings
7 with Duffy Johnson to discuss what LAN would or
8 would not be doing with regard to the project --
9 the Flint water treatment project in 2013?

10 A. Not that I can recall, no.

11 Q. Were you engaged in any
12 conversations or did you have any conversations
13 with the MDEQ in 2013 about what LAN's scope of
14 work would be?

15 A. No, I can't say that I did.

16 Q. And I think you said before that
17 at least in your mind, LAN's scope of work was
18 primarily related to retrofitting and design of
19 the Flint water treatment plant, correct?

20 A. Correct.

21 MR. MORRISSEY: Object to form.

22 Q. And it was not necessarily with
23 regard to decisions on water treatment, water
24 quality, or dosages or chemicals that would be

1 utilized to treat the Flint River water,
2 correct?

3 MR. MORRISSEY: Object to form.

4 A. Correct.

5 Q. A few months back, Brent Wright
6 testified about how the dosages were decided or
7 at least calculated with regard to the chemical
8 treatment process, okay?

9 A. Okay.

10 Q. And I believe he deferred some
11 questions to you about how that process took
12 place and how you made the calculations or how
13 you made the decisions regarding what chemicals
14 would be utilized and what dosages of those
15 chemicals would be utilized; is that fair?

16 A. That's fair to say.

17 MR. MORRISSEY: Object to form.

18 Q. Can you describe for me exactly
19 how it was that you would calculate, for
20 instance, lime softening and what dosages would
21 be needed for that?

22 A. Yeah. Normally you would try to
23 simulate the plant process in the laboratory.
24 With the softening process, it was always --

1 you're looking at your final hardness number, I
2 guess is what you would go by. In a lot of
3 other testimony, they talked about trying to
4 stay as similar to Detroit as possible. But
5 usually most of those dosages were determined in
6 the lab based off what was coming in in our
7 river water where we would add different doses
8 of the chemical and see which gave us the best
9 result. So a pretty simple, standard jar test
10 in the water treatment field.

11 Q. Brent Wright testified that there
12 was some sort of computer program that might
13 have been utilized to assist in assessing or
14 evaluating dosages of chemicals to be utilized
15 in the treatment process.

16 Do you have any understanding or
17 recollection of that?

18 A. I do not, no.

19 Q. And, again, as you sit here today,
20 you don't have any specific recollection of any
21 recommendations made by LAN or anyone else in
22 June of 2013 about the need for corrosion
23 control assessments or treatments?

24 A. No, I do not.

1 Q. Are you familiar with the term
2 "primacy"?

3 A. Yes.

4 Q. And what does that mean to you?

5 A. Well, let me think how I would
6 describe it. If they have -- whoever has
7 primacy has, in effect, to me, the power to
8 enforce some rules or dictate power and make
9 decisions, I guess. That's kind of a broad
10 definition, but they're the ones to enforce
11 things.

12 Q. And did you understand that the
13 DEQ was the primacy agent with regard to the
14 water treatment decisions that related to the
15 Flint water treatment plant?

16 A. Yes.

17 MR. KUHL: Objection to form.

18 MR. SCHNATZ: Objection to form.

19 MS. COLLINS: Objection to form.

20 Q. I think you previously described
21 in your testimony that the DEQ was kind of like
22 a coach and a cop; is that fair enough?

23 A. Yeah, that's fair.

24 Q. What did that exactly mean?

1 A. Well, they're there to help you
2 when you need it, but if you're not following
3 the procedure, they're there to slap you on the
4 hand if not.

5 Q. Is it fair to say that the DEQ was
6 your primary resource when you had questions
7 about how to treat the water and the Flint water
8 treatment plant when you went online in April of
9 2014?

10 A. Yes.

11 Q. If you had disagreed with
12 something that the DEQ had instructed you to do
13 or not do, did you have any recourse or any
14 ability to appeal that type of a decision?

15 MS. COLLINS: Objection; form.

16 MR. MORRISSEY: Object to form.

17 A. Not to my knowledge.

18 Q. You just testified previously that
19 you always thought under the Lead and Copper
20 Rule phosphates or some form of corrosion
21 control would need to be included in the
22 finished water treatment process, correct?

23 A. Correct, yes.

24 Q. And if you disagreed -- well,

1 strike that.

2 If the DEQ said that none was
3 going to be required, you couldn't go to anybody
4 else and say, "That decision is just plain
5 wrong," could you?

6 MR. KUHL: Objection to the form.

7 MR. SCHNATZ: Objection.

8 A. No, not to my knowledge, no.

9 Q. I'm going to turn your attention
10 to test runs. You testified before about there
11 being test runs or an initial test run that
12 lasted 30 days.

13 Do you recall that?

14 A. Yes.

15 Q. And I believe your recollection
16 was that occurred in July of 2013 -- or -- 2013,
17 correct?

18 A. Correct, yes.

19 Q. What was the purpose of the
20 initial plant test run?

21 A. It was just to operate for more
22 than a week, like we usually did, to -- the way
23 our softening process worked, to get it up and
24 running within a week and actually continue to

1 run it, or to learn anything from it, a week
2 wasn't long enough. So I think that's why we --
3 they wanted to go for a full month so we could
4 get that operation up and running, see if we
5 could get it to stabilize and utilize that time
6 for softening.

7 Q. Who participated in the initial
8 plant test run?

9 A. Elaborate by "who." I don't know
10 where you're getting that.

11 Q. Were there individuals from LAN
12 that were present during the initial plant test
13 run in July of 2013?

14 A. I don't recall, but I would
15 assume. Well, I shouldn't assume. I would
16 think they would have been there. I can't
17 recall. I don't think they were there every day
18 the whole time through the entire plant run, but
19 I imagine they were in a time or two.

20 Q. Do you recall whether Mike Prysby
21 or Steve Busch were present at any time during
22 the plant test run?

23 A. I do remember Mr. Prysby stopping
24 by, yeah, on a couple occasions during that run.

1 Q. And do you recall why he stopped
2 by?

3 A. I thought he just wanted to see
4 how things were going.

5 Q. How long did the initial plant
6 test run?

7 A. Oh, it was roughly about 30 days.

8 Q. And what were the results of the
9 initial plant test run?

10 A. Oh, if we want to look at the
11 results, when I think of results, I think of
12 data and stuff, but without -- I mean, we ran
13 into a few issues with things. We determined a
14 few mechanical items needed to be corrected.

15 Q. Is it fair to say that the initial
16 plant test run of 30 days was stopped when it
17 was stopped because the plant wasn't operating
18 the way it was supposed to be operating and you
19 couldn't obtain any meaningful data from the
20 initial test run?

21 MR. MARKER: Object to form.

22 A. I'll say that's part of it. The
23 other part was our staffing levels were
24 dramatically low, and everybody had worked

1 double shifts all month so ...

2 Q. How many employees did you have in
3 July 2013 that were working during the initial
4 plant test run?

5 A. Probably somewhere in the number
6 of 12 to 15.

7 Q. And how many of those were
8 licensed operators?

9 A. During the test run, the majority
10 of them would have been licensed, at least have
11 the lowest license.

12 Q. As far as ceasing the initial
13 plant test run because there were problems with
14 the operation of the plant in general, I think
15 you testified before that there were several
16 areas, including the ozone, that weren't working
17 properly; is that correct?

18 A. Correct, yeah.

19 Q. And the east side softening
20 clarifier arm had structural issues?

21 A. Correct.

22 Q. And the coagulant and polymer
23 systems were gone?

24 A. Correct.

1 Q. And some -- there were issues with
2 filter systems and the SCADA system, correct?

3 A. Correct, yes.

4 Q. How many other test runs did the
5 city of Flint run after the July 2013 initial
6 plant test run?

7 A. I don't know, without seeing the
8 data, exactly how many. I want to say maybe
9 possibly at least two more after that.

10 Q. And I think you testified before
11 in response to Mr. Campbell's question, I think,
12 the initial plant test run was the longest test
13 run that you actually ever performed with the
14 Flint water treatment plant before April of
15 2014, correct?

16 A. Correct, yes.

17 Q. Do you recall having any
18 discussions with anyone with LAN about the
19 failed test run in July of 2013?

20 MR. MARKER: Objection; form.

21 MR. KIM: Object.

22 A. No, I can't say that I do.

23 Q. Were you in regular contact with
24 Warren Green or anyone else with LAN in July of

1 2013 when you were conducting the initial plant
2 test run?

3 A. I can't say that I was.

4 Q. If you could turn your attention
5 to what was previously marked as Brent Wright
6 Exhibit 49.

7 Can you take a look at the
8 document and the attachment.

9 And I think you were shown this by
10 Mr. Campbell. I think he marked it as a
11 different exhibit number --

12 A. Yes, okay.

13 Q. -- in this deposition.

14 Do you recognize the document
15 that's Exhibit 49 from Brent Wright's
16 deposition?

17 A. Yes, I do.

18 Q. And that was an initial scope of
19 upgrades or proposed scope of upgrades to the
20 Flint water treatment plant, correct?

21 A. Correct, yes.

22 Q. Do you have an understanding of
23 who created that document or who actually made
24 the proposal?

1 A. Yes.

2 Q. And who was it?

3 A. My understanding, LAN.

4 Q. And that was basically limiting or
5 identifying what it was that was their proposed
6 scope as of August 20 of 2013, correct?

7 A. Correct.

8 MR. MARKER: Object to the form.

9 MR. MORRISSEY: Objection to form.

10 Q. Do you happen to know or recall
11 whether there was anything in that proposal that
12 related to finished water quality or water
13 treatment processes?

14 MR. MORRISSEY: Object to form.

15 A. Not that I was aware of, no.

16 Q. If I could turn your attention to
17 the last page. Under Section 3 at the very end,
18 it says, "Other Items to Address to Finalize
19 Scope of Work."

20 Do you see that?

21 A. Yes.

22 Q. And it lists four things.

23 Do you see that?

24 A. I do.

1 Q. And one of those things, A is
2 "Options for handling the disposal of lime
3 sludge from softening."

4 A. Uh-huh.

5 Q. Do you see that?

6 A. Yes.

7 Q. B is "Requirements for CT and
8 enhanced treatment."

9 Do you see that?

10 A. Yes.

11 Q. Sub C is "Impacts of using the
12 river as a continuous supply (quantity, quality
13 monitoring and control reservoir operating
14 levels)."

15 Do you see that?

16 A. Yes.

17 Q. And D is "Chemical storage
18 options," right?

19 A. Right.

20 Q. And I think you testified before
21 that it was your understanding these were
22 additional things that the city needed to
23 evaluate moving forward as to completing the
24 design or the retrofit of the Flint water

1 treatment plant, correct?

2 A. Correct.

3 Q. And in particular, subsection C,
4 the "Impacts of using the river as a continuous
5 supply," the city of Flint actually took that
6 responsibility on subsequent to this proposed
7 scope of work, correct?

8 MR. KIM: Objection as to
9 foundation.

10 MR. MORRISSEY: Object to form.

11 A. You know, I really can't say. As
12 a continuous supply, I don't really recall
13 conversations about a continuous supply.

14 Q. But as far as water quality and
15 treatment, that was something that the city
16 ultimately did, correct?

17 A. Correct, yes.

18 Q. Do you recall actually ever seeing
19 this document before today?

20 A. No, I do not, actually.

21 Q. And you don't know whether LAN's
22 scope of work was further narrowed from Exhibit
23 49 in subsequent proposed scopes or in the
24 ultimate contract?

1 A. No.

2 Q. Do you have any understanding of
3 specifically what the scope of work was that was
4 set forth in the final change order number 2
5 when LAN was retained to do work on the Flint
6 water treatment plant?

7 A. I do not.

8 Q. I think you were asked this
9 before, but do you have any recollection of any
10 recommendations made by Warren Green -- well,
11 strike that.

12 You recall that Warren Green
13 specifically made recommendations that there
14 would need to be additional plant test runs on
15 the Flint water treatment plant before water
16 should be distributed from the Flint water
17 treatment plant.

18 You recall that?

19 A. I do, yes.

20 Q. And, in fact, do you recall when
21 those recommendations were made?

22 A. I can't really recall when they
23 were made. I would -- it seems like they would
24 be after our test run in July.

1 Q. And the city never did a 60- to
2 90-day plant test run, correct?

3 A. Correct.

4 Q. They never did any plant test run,
5 prior to distributing water, where they
6 evaluated the specific water characteristics and
7 water quality coming from the plant before April
8 of 2014 when the water went out?

9 MR. MARKER: Objection to form.

10 MR. KUHL: Objection to form.

11 A. I can't say that I do, no.

12 Q. It would be important to do a
13 60-to-90 plant test run to evaluate the water
14 quality coming out of the plant before it was
15 distributed to the public, correct?

16 A. Oh, absolutely, yes.

17 Q. It would be extremely important to
18 understand how you were treating the water and
19 whether it was presenting any type of danger to
20 the public, correct?

21 A. Correct, yes.

22 Q. And despite those concerns, the
23 city never did it, correct?

24 A. Correct.

1 Q. Did you ever raise the issue with
2 any of your superiors, saying, "Hey, we've got
3 this recommendation about needing to do a 60- to
4 90-day plant test run to evaluate water quality,
5 and I think we need to do it"?

6 A. I had stated to my superiors
7 within the city that, yeah, we needed more time,
8 more practice.

9 Q. And when did you make those
10 suggestions or when did you address that with
11 your supervisors?

12 A. I will say that was late 2013.

13 Q. Okay. And who was it that you
14 would have expressed that to?

15 A. Mr. Johnson and Mr. Croft,
16 Mr. Wright as well.

17 Q. And do you recall whether this was
18 one conversation or discussion or multiple
19 discussions?

20 A. Most likely it was multiple.

21 Q. Did they tell you -- strike that.
22 Did Mr. Croft or anyone else with
23 the city of Flint tell you that you were not
24 going to be able to do a 60- to 90-day test run

1 to evaluate water quality before going online?

2 A. I don't believe anyone ever told
3 me that, but our staffing was showing me that we
4 wouldn't be able to do that.

5 Q. In 2013, when you had the
6 discussions with your superiors about the 60- to
7 90-day plant test run, did you always anticipate
8 that a test run would take place before you
9 distributed water?

10 A. Yes, I did.

11 Q. Did it cause you concern that you
12 and the city of Flint did not do a 60- to 90-day
13 plant test run before the water treatment plant
14 went online in April of 2014?

15 MR. MARKER: Objection to form.

16 A. I will say it did cause concern
17 yep. It did make me worry.

18 Q. And what were your worries? Why
19 were you worried?

20 A. Well, this was a big opportunity
21 for the city of Flint, and I was worried we
22 would fail in one way, shape, or form.

23 Q. And by failure, what do you mean?

24 A. My worst fear was that we couldn't

1 treat enough water that the city would need; we
2 would run out of water.

3 Q. Were you concerned about treating
4 the Flint River water itself and the challenges
5 that proposed to you?

6 A. Yes --

7 MR. KIM: Objection to form.

8 A. -- I do. I did with the softening
9 aspect. If we could have treated without
10 softening, I wouldn't have had as many
11 reservations.

12 Q. I may have asked this before, but
13 do you have an understanding, is lime softening
14 itself alone a form of corrosion control?

15 A. Not that I'm aware of.

16 Q. I want you to presume that lime
17 softening can be a form of corrosion control,
18 okay?

19 A. Okay.

20 Q. If that's the case and you didn't
21 want to utilize it and you omitted it from the
22 water being distributed from the Flint water
23 treatment plant, there would be no corrosion
24 control at all in the water that was being

1 distributed to the public in April of 2014,
2 correct?

3 MR. KIM: Objection to form.

4 MR. MARKER: Objection to form --

5 A. Correct.

6 MR. MARKER: -- foundation.

7 MR. KUHL: What was the answer?

8 I'm sorry.

9 MR. KIM: Correct.

10 THE WITNESS: I said correct.

11 BY MR. GAMBLE:

12 Q. I think in 20- -- before the
13 changeover or before the switch actually
14 occurred in April of 2014, right before that,
15 you had concerns about starting up the plant and
16 distributing water, didn't you?

17 A. Yes.

18 Q. And specifically what were your
19 concerns at that time?

20 A. Mainly with staffing and the newer
21 employees and their inexperience with the
22 softening process.

23 Q. And it sounds like you were
24 concerned that they wouldn't be able to properly

1 treat the water that was coming out of Flint
2 water treatment plant in April of 2014; is that
3 fair?

4 MR. KUHL: Objection to form.

5 A. Yeah. I'll say the softening
6 process is a dynamic process and there's a
7 number of things to keep your eye on, and it can
8 get out of hand quickly if it's not monitored.

9 Q. What types of things can get out
10 of hand if they're not monitored properly?

11 A. Well, on the softening process, we
12 added just a -- we overloaded the water with
13 lime. The way our softening clarifiers worked,
14 we would keep a -- we would form a lime sludge
15 blanket kind of on the bottom of the clarifier.

16 We'd get disruptions or changes in
17 the incoming water, and it can disrupt our
18 little -- how do I want to say this -- our
19 sludge blanket, as we would call it, of lime.
20 And that could cause that to not stay settled,
21 raise up, come over our weirs, and basically
22 clog our filters in our next step of the
23 process, which would set us back, so we'd have
24 to backwash filters, put them back in service.

1 And that's where the water service comes into --
2 with that type of lime softening, there's little
3 room for error.

4 Q. It's fair to say that in April --
5 mid April 2014, you didn't want to start the
6 plant up and start distributing water to the
7 public, correct?

8 A. Correct.

9 Q. You felt that it was -- it was too
10 soon to be doing so, correct?

11 A. Correct.

12 Q. And you said you needed more time
13 with staffing, right?

14 A. Correct.

15 Q. And would you need additional time
16 or would you have wanted additional time to have
17 a plant test run so you could actually practice
18 the treatment of water with your staff?

19 A. Absolutely, yeah.

20 Q. And so you could ensure that that
21 water that was coming from the plant was safe
22 for the public.

23 A. Absolutely, yes, and have --
24 instill confidence in myself and in my employees

1 to do it.

2 Q. I know this has been marked
3 before. I'm going to mark it again, whatever
4 the next exhibit is.

5 - - -

6 (Glasgow Deposition Exhibit 24 marked.)

7 - - -

8 MR. KIM: What's the Bates number?

9 MR. GAMBLE: The Bates number is
10 SOM0000054.

11 BY MR. GAMBLE:

12 Q. Have you had a chance to review
13 that?

14 A. Yes.

15 Q. And that's an e-mail from you to
16 Adam Rosenthal, correct?

17 A. Correct, yes.

18 Q. Who is Adam Rosenthal?

19 A. He's a member of the DEQ, yep.

20 Q. And what role did he play in the
21 DEQ; do you know?

22 A. A lot of times he -- his signature
23 was always on our yearly monitoring schedule.
24 So it had be before we were required to test in

1 the water.

2 Q. And this is basically you sending
3 a note to Adam Rosenthal expressing your
4 concerns that we've discussed about starting up
5 the plant in April of 2014, correct?

6 A. Correct.

7 Q. And it says, third sentence, "I
8 have people above me making plans to distribute
9 water ASAP."

10 Do you see that?

11 A. Yes.

12 Q. Who were those people that were
13 pressuring you to distribute water out of the
14 Flint water treatment plant in April of --

15 MR. MARKER: Objection; form,
16 foundation.

17 MR. KIM: Objection; form,
18 foundation.

19 Q. -- 2014?

20 A. Yeah, that was any of them. Any
21 of my superiors in the city of Flint, which
22 would have been Mr. Johnson, Mr. Croft, and
23 anyone above them.

24 Q. Did you have any pressure or feel

1 any pressure from the DEQ about starting up the
2 plant in April of 2014?

3 A. No, I can't say I felt any
4 pressure from the state.

5 Q. You next state, "I was reluctant
6 before, but after looking at the monitoring
7 schedule and our current staffing, I do not
8 anticipate giving the okay to begin sending
9 water out any time soon."

10 Do you see that?

11 A. Yes.

12 Q. Was it ultimately your decision
13 about whether or not you could start the plant
14 up on April -- or in mid April of 2014?

15 MR. KIM: Objection as to form.

16 A. I don't believe it was.

17 Q. Did you have any veto power if
18 they -- if you were receiving pressure to start
19 sending water out of the Flint water treatment
20 plant?

21 A. No.

22 Q. Was this your attempt to notify
23 the DEQ and let them know that this was going to
24 start up regardless of whether you were for it

1 or against it?

2 MS. COLLINS: Objection; form.

3 A. Exactly, yes.

4 MR. CAMPBELL: Maybe you could try
5 to keep your voice up just a little bit,
6 Mr. Glasgow.

7 THE WITNESS: I'll try.

8 Q. And you further say, the next
9 sentence, if water is distributed from this
10 plant in the next couple of weeks, it will be
11 against your direction?

12 A. Correct, yes.

13 Q. And had you expressed all of these
14 concerns to your superiors in mid April of 2014?

15 A. Yes.

16 Q. And this was a last ditch effort
17 to have somebody, the DEQ in particular, step in
18 and perhaps grant you a reprieve as far as
19 starting the plant up, correct?

20 MS. COLLINS: Objection; form.

21 A. Correct, yes.

22 Q. Did you ever receive a response
23 from Adam Rosenthal to this e-mail?

24 A. No, I don't believe I got any

1 response to this e-mail.

2 Q. It sounds like, from the e-mail
3 and your wording, that you were really concerned
4 about starting the plant up, right?

5 A. Right --

6 MR. KIM: Objection as to form.

7 A. -- yes.

8 Q. If you didn't receive a response
9 to this, did you ever consider calling Adam
10 Rosenthal to discuss this in further detail and
11 to express your concerns to him?

12 A. Without any response to the
13 e-mail, I didn't figure I'd get a response any
14 other way.

15 Q. You ultimately deleted this e-mail
16 from your e-mail account, didn't you?

17 A. I did.

18 Q. And you ultimately deleted it
19 because it kind of looked bad, right?

20 MR. MARKER: Objection; form,
21 foundation.

22 A. I won't say it looked -- well,
23 I -- no, I didn't delete it because I thought it
24 looked bad. I thought I was barking up the

1 wrong tree.

2 Q. Were you concerned that your
3 supervisors were going to see the e-mail and
4 perhaps reprimand you in some way for it?

5 A. No. At that point I wasn't really
6 worried about that, to be honest with you.

7 Q. Well, then why did you delete the
8 e-mail?

9 A. I just -- no response from
10 anybody. Like I said, I thought that I was
11 going well above my pay grade even making the
12 suggestion.

13 Q. Were you concerned at all about
14 the public seeing this e-mail at some point?

15 A. No, I wouldn't say that. I don't
16 think that crossed my mind at all.

17 Q. We previously deposed Duffy
18 Johnson, and it came up as to whether phosphates
19 were always considered and always thought to be
20 a part of the final design.

21 Did you have that understanding as
22 well?

23 MR. KIM: Objection as to form.

24 MR. SCHNATZ: Same.

1 A. Can you restate that. Can you
2 read that back to me.

3 MR. GAMBLE: Can you reread it to
4 him.

5 (Record read back as follows:
6 "Question: We previously deposed Duffy
7 Johnson, and it came up as to whether
8 phosphates were always considered and
9 always thought to be a part of the final
10 design. Did you have that understanding
11 as well?")

12 MR. KUHL: Objection to form and
13 foundation.

14 A. I can't say that I did.

15 Q. But certainly you knew in April of
16 2014, when you flipped the switch to turn the
17 plant on and start distributing water, that
18 there were no phosphates that were being fed
19 into the water or into the system, correct?

20 MR. MARKER: Objection; form,
21 foundation.

22 A. Correct.

23 MR. MARKER: There has been no
24 testimony to establish he flipped the

1 switch.

2 Q. In fact, there was no phosphate
3 feed system in place, correct?

4 A. Correct.

5 Q. After the switchover and after the
6 water treatment plant started distributing water
7 from the Flint River in April of 2014, did you
8 have any discussions with anyone at LAN about
9 the water treatment process or water quality
10 that you were achieving in the Flint water
11 treatment plant?

12 MR. KIM: Objection as to form.

13 A. I don't recall. I would imagine I
14 did have a few conversations. When and where
15 and with who, I can't say offhand here.

16 Q. Was it fair to say that after the
17 city started distributing water from the Flint
18 River in April of 2014 that LAN's work was
19 complete or virtually complete in your mind at
20 that time?

21 MR. KIM: Objection as to form and
22 foundation.

23 A. I will say, for the most part, I
24 believe it was complete, but I thought we still

1 had a couple upgrades that pertained to the KWA
2 water coming in that they would maybe be around
3 with later on.

4 Q. So basically they weren't doing
5 anything, based on your understanding, as to the
6 operation of the plant with the Flint River
7 water, but they were still working on upgrades
8 for the KWA switchover, which was going to occur
9 two years later; is that your understanding?

10 A. Correct, yeah.

11 Q. Do you recall ever having
12 discussions with Warren Green about the water
13 quality results and the monthly operating
14 reports coming out of the Flint water treatment
15 plant after April of 2014?

16 A. Not offhand, I do not.

17 Q. And LAN didn't have any role
18 whatsoever in evaluating water quality and water
19 treatment after April of 2014, correct?

20 MR. KIM: Objection as to form and
21 foundation.

22 A. Not that I recall, no.

23 Q. Did you ever have any -- well,
24 strike that.

1 When did you first become aware
2 that there was a potential lead problem in the
3 water? Was that LeeAnne Walters and what we've
4 discussed there?

5 A. Yes, that's really what stimulated
6 me to believe there was an issue.

7 Q. At that time, did you have any
8 discussions or did you reach out to LAN to
9 discuss the lead issues or anything relating to
10 lead in the water?

11 A. At one point sometime, it would
12 have been late February or early March of '15,
13 after -- when Mr. Green was around from LAN, and
14 I leaned over to him and said, "Start designing
15 our phosphate feed system because I've got a
16 feeling we're going to need this soon."

17 Q. And when was that discussion or
18 conversation?

19 A. That would have been -- yeah,
20 February or March of '15, right after the
21 LeeAnne Walters issue.

22 Q. And what prompted that discussion?

23 A. That was just me after dealing
24 with Ms. Walters, and I had Warren Green there.

1 I forget why he was at the plant, but -- and I
2 knew he was our engineer so I knew they would be
3 part of the design when we would need it. So I
4 was putting the bug in his ear that we're going
5 to need something here eventually.

6 Q. And do you specifically recall
7 Warren Green's response to that?

8 A. I do not.

9 Q. Do you know when LAN was
10 ultimately charged with designing a phosphate
11 feed system for the Flint water treatment plant?

12 A. I'm going to say it was probably
13 August or September of '15.

14 Q. Do you recall why it took so long
15 for LAN to be retained to actually do that work?

16 A. I believe in August or September
17 of '15 we received a letter from the MDEQ
18 stating that we needed to add phosphate.

19 Q. So you felt that phosphate -- a
20 phosphate feed system would potentially need to
21 be instituted or implemented in February of
22 2015?

23 A. Yes.

24 Q. And did you tell your supervisors

1 that at all?

2 A. Yes.

3 Q. Who did you tell?

4 A. The same gentlemen I'll rattle off
5 before, Mr. Wright, Mr. Johnson, and Mr. Croft.

6 Q. And what was their response to
7 your questioning them about the need for a
8 phosphate feed system?

9 A. It was kind of like we'll cross
10 that bridge when we get to it. They were
11 waiting for the second round of lead and copper
12 samples to come in.

13 Q. So between February of 2015 and
14 September of 2015, when LAN was actually
15 retained to design the phosphate feed system,
16 your supervisors were waiting on test results;
17 is that your understanding?

18 A. That's my understanding, yes.

19 Q. And all the while, the city of
20 Flint and their residents were being exposed to
21 lead in the water that they were receiving; is
22 that correct?

23 MR. KIM: Objection as to form.

24 MS. COLLINS: Objection to form.

1 A. That's correct.

2 Q. At one point in late 2014, the
3 city had a problem with TTHM levels, correct?

4 A. Correct, yes.

5 Q. And what was going on at the time?

6 A. I think originally we had had some
7 issues with coliform bacteria before then, which
8 led us to keep increasing our chlorine dosage
9 into the water, which then created the TTHM
10 problem.

11 Q. And you understand LAN was
12 retained to address or at least do the OER to
13 evaluate the TTHM problem?

14 A. Yes.

15 Q. Did you have any role whatsoever
16 in that report?

17 A. Not much of a role, if any.

18 Q. Do you know what LAN was asked to
19 specifically do and evaluate as part of their
20 OER on the TTHM issue?

21 A. I can't say I can recall exactly.
22 The state had issued us to do an evaluation. So
23 that's what I thought we had contracted LAN --
24 an evaluation in regards to the TTHM issue.

1 Q. And if they were asked to only
2 address the TTHM issue and how to potentially
3 lower it using existing processes in the plant,
4 i.e., no new design, would that be your
5 understanding of what they were charged with?

6 A. Yes.

7 Q. Okay. Do you have a specific
8 understanding of what the cause of the TTHM
9 problem was?

10 A. Yes, I would say I do.

11 Q. And what was it?

12 A. It was a combination of our total
13 organic carbon level in the Flint River water,
14 and then on top of that, the warm weather in the
15 summers and keeping a chlorine residual out in
16 the distribution system as we were supposed to.
17 The precursors for TTHMs were already there, and
18 we just kept adding chlorine to meet our other
19 limits that ultimately created the TTHM issue.

20 Q. And if there was a sewer leak that
21 was upstream of the water treatment plant, could
22 that contribute to increased TTHM levels?

23 MR. MARKER: Objection; form,
24 foundation.

1 A. I can't say that it could. You
2 know, the precursors were in the river as it
3 was. So what's coming out of the sewer, I can't
4 say.

5 Q. Do you recall whether there were
6 any discussions with LAN, when they were
7 evaluating the TTHM issue, as to whether LAN
8 should evaluate other water quality issues
9 coming out of the treated water at the Flint
10 water treatment plant?

11 A. I can't say that there was, no.

12 Q. And you don't know whether the
13 city of Flint responded that they were going to
14 retain somebody else to evaluate overall water
15 quality?

16 A. No, I can't say.

17 MR. KIM: Objection as to
18 foundation.

19 Q. Do you have any understanding or
20 recollection of what LAN's recommendation was
21 with regard to addressing the TTHM issue?

22 A. No, I can't say without reading
23 the report.

24 Q. Do you recall ever reading the

1 report?

2 A. At one time, I do, yes.

3 Q. And do you have any understanding
4 of whether they recommended increasing the
5 ferric chloride dosage or not?

6 A. I do recall that coming up. I
7 can't say if it was LAN that instituted that or
8 not.

9 Q. Shifting gears to ferric chloride.
10 You're familiar with ferric chloride obviously,
11 right?

12 A. Correct, yes.

13 Q. What does ferric chloride do in
14 the treatment process?

15 A. It's basically a coagulant. It
16 will grab particulate matter out of the water,
17 grab ahold of it, and then the heavy iron
18 content makes it settle down.

19 Q. And it's a common coagulant used
20 in the treatment of water, correct?

21 A. Correct, yes.

22 Q. In fact, Flint was using ferric
23 chloride in the decades before the water
24 treatment plant and the switchover was

1 announced, correct?

2 A. Correct.

3 Q. As a licensed F-1 operator, you're
4 aware of the potential impact on finished water
5 quality if the ferric chloride dosage is
6 increased, correct?

7 A. Yes.

8 Q. And you're also aware of the
9 impacts on water quality if it's decreased,
10 right?

11 A. Yes.

12 Q. I think we established before, the
13 polymer systems -- did the Flint water treatment
14 have polymer systems in place?

15 A. Not prior to the start.

16 Q. So they didn't have them or they
17 weren't functioning?

18 A. I'll say they weren't functioning,
19 I guess, when you put it that way.

20 Q. Was it contemplated that you would
21 utilize polymers as part of the treatment
22 process when the Flint water treatment plant
23 went online in April of 2014?

24 A. There was always that possibility

1 of polymers to aid with the softening process.

2 Q. Had the polymers been used, that
3 would have impacted your ferric dosage, wouldn't
4 it?

5 A. Possibly, yes.

6 Q. In fact, utilization of polymers
7 and effective utilization will decrease the need
8 for ferric chloride, right?

9 A. Correct, yes.

10 Q. You didn't increase ferric
11 chloride dosage, did you, when LAN issued its
12 operational report in May of 2015?

13 MR. KUHL: Objection to form and
14 foundation.

15 A. No, I can't say that we did. We
16 would increase dosage as necessary depending on
17 the levels of turbidity coming out of the Flint
18 River.

19 Q. So if LAN recommended in its
20 reports, the TTHM reports, to slightly increase
21 ferric dosage, you didn't follow those
22 recommendations, did you?

23 MR. KUHL: Objection to form.

24 A. I can't recall.

1 Q. Well, you didn't look at the
2 report and say, "Okay. They're recommending it
3 so I'm going to do it."

4 Right?

5 MR. KUHL: Objection to form.

6 A. Yeah, I can't say I did.

7 Q. With regard to the phosphate feed
8 system, I think you testified your recollection
9 was LAN would have been retained to do that in
10 September of 2015?

11 A. Correct, yes.

12 Q. And do you recall -- LAN expedited
13 the design of this, didn't they?

14 A. Yes, they did.

15 Q. In fact, they had finished the
16 design and actually had the construction up and
17 running in late 2015, right?

18 A. Right, correct.

19 Q. And that phosphate feed system was
20 up and operational in December of 2015, wasn't
21 it?

22 A. Yes.

23 Q. That's a pretty quick turnaround,
24 wasn't it?

1 A. Yes.

2 MR. GAMBLE: I'll tell you what,
3 Mr. Glasgow, that's all I've for right
4 now. I'm going to reserve the remainder
5 of my time.

6 MR. MARKER: Go off the record and
7 take a break?

8 MR. GAMBLE: Yeah.

9 THE VIDEOGRAPHER: We are going
10 off the record at 2:19 p.m.

11 (Recess taken.)

12 THE VIDEOGRAPHER: We are back on
13 the record at 2:33 p.m.

14 - - -

15 EXAMINATION

16 BY MR. THOMPSON:

17 Q. Good afternoon, sir. My name is
18 Craig Thompson. I represent Rowe Professional
19 Services Company.

20 A. Okay.

21 Q. I'm just going to have a few
22 questions for you, okay?

23 A. Okay.

24 Q. Are you familiar with Rowe --

1 we'll call it Rowe Engineering?

2 A. Yes.

3 Q. You're familiar with the fact that
4 they're, like, a civil engineering and surveying
5 firm located in Flint, Michigan?

6 A. Correct, yes.

7 Q. Okay. In the course of time that
8 you were at the water treatment plant -- that
9 was a roughly, what, ten-year period?

10 A. Ten years, roughly.

11 Q. -- was there ever an occasion
12 where you would need engineering or surveying or
13 services from Rowe Engineering?

14 A. I myself? No.

15 Q. Okay. Are you aware that they had
16 a contract with the city of Flint to serve as
17 the acting city engineer for a duration of time?

18 A. Yes.

19 Q. I don't think it's necessary to
20 get into the actual period of when they were
21 acting in that capacity. But you're aware of
22 that?

23 A. Yes, I was aware they were in that
24 capacity, yep.

1 Q. Okay. And do you have a
2 familiarity with how often they would provide
3 services, if any, to the water treatment plant
4 division of the city?

5 A. Yeah, I can't say I remember any
6 instances that I recall.

7 Q. Okay. With regards to the
8 upgrades that were being done at the plant in
9 contemplation of the switch from the DWSD water
10 to the KWA, and in the interim the Flint River,
11 do you know what Rowe's involvement was, if any,
12 in regards to the upgrades that were going to be
13 made to the plant in contemplation of that?

14 A. Yeah, I can't say. I can't say
15 that I know they were involved in any of those
16 discussions.

17 Q. Okay. Do you know or do you have
18 reason to believe that Rowe had expertise --
19 engineering expertise in the area of water
20 quality or water treatment?

21 A. No, I can't say that I did.

22 Q. Okay. Do you know who the city
23 did hire as their engineer to provide services
24 in relation the upgrades to the plant in

1 contemplation of the switch?

2 A. Right. And from my experience, I
3 only remember LAN.

4 Q. Okay. So if you made reference to
5 an engineering firm during that time frame,
6 during the upgrades or the aftermath of that
7 switch, that would have been to LAN --

8 A. Yes.

9 Q. -- that you made reference to --

10 MR. GAMBLE: Objection; form and
11 foundation.

12 Q. -- an engineering firm?

13 A. Yes.

14 Q. If we could go to the book for the
15 Brent Wright deposition and reference back to
16 that Exhibit 45.

17 MR. MARKER: Is it the sign-in
18 page?

19 MR. THOMPSON: Yeah.

20 BY MR. THOMPSON:

21 Q. Thank you. If you could take a
22 look at that for second, you'll see the name Jim
23 Redding there for Rowe.

24 A. Yes, I see it.

1 Q. Do you know who Jim Redding is?

2 A. I don't think I could pick his
3 face out of a crowd, I'll say that.

4 Q. Okay. And you were already asked
5 by a couple attorneys here today about this
6 meeting, and it seems like we pretty much tapped
7 your memory as to what occurred during that
8 meeting.

9 But I have to ask anyways, do you
10 happen to recall anything that Jim Redding might
11 have said during the course of that meeting on
12 June 26th of 2013?

13 MR. KIM: Objection to foundation.

14 A. Yes, I can't say I remember
15 anything from Mr. Redding.

16 Q. Okay. Do you know anybody else
17 that works or worked at Rowe Engineering?

18 A. I can't think of a name offhand.
19 I'm sure I've met one or two other engineers
20 that have worked there, but I can't say what
21 capacity they were under or why I would have met
22 with them.

23 Q. Okay. Would you believe that you
24 would have conferred with them at all in regards

1 to treatment of the water at the water treatment
2 plant?

3 MR. KIM: Objection as to form and
4 foundation.

5 A. No, I can't say that I would have.

6 Q. Okay.

7 Do you have any recall of dealings
8 with Rowe at all before or after the switch to
9 utilizing the Flint River, as far as the
10 upgrades to the plant and things like that, in
11 relation to the --

12 A. Yeah, I don't recall anything
13 after the switch, and if I didn't see a name on
14 this little meeting list, I don't think I would
15 recall anything prior.

16 Q. Okay.

17 Do you have a recollection of ever
18 discussing any aspect of the Flint water crisis
19 with anybody from Rowe Engineering?

20 A. No, I don't -- I don't recall any,
21 any conversations.

22 MR. THOMPSON: Okay. That's all
23 the questions I have for you. Thank
24 you.

1 THE VIDEOGRAPHER: We're going off
2 the record at 2:40 p.m.

3 (Recess taken.)

4 THE VIDEOGRAPHER: We are back on
5 the record at 2:44 p.m.

6 - - -

7 EXAMINATION

8 BY MR. KIM:

9 Q. Okay. Good afternoon,
10 Mr. Glasgow. My name is William Kim. I
11 represent the city of Flint here.

12 We're familiar with each other; is
13 that correct?

14 A. Correct, yes.

15 Q. We knew each other when you worked
16 for the city of Flint; is that correct?

17 A. That is correct.

18 Q. Now, for what's going on here
19 today, you understand that you're being asked
20 questions about things that occurred four to
21 seven years ago?

22 A. I am well aware of that, yes.

23 Q. Okay. And -- but you're being --
24 and your answers to the questions that have been

1 posed to you today, have you been answering
2 based on the information that you know now?

3 A. No, I've been trying to answer on
4 what I knew then.

5 Q. You say you've been trying to.

6 A. Yeah, and I will make the
7 attempt -- if I think it's something I've
8 learned after the fact, I will try to stipulate
9 that and point that out.

10 Q. Okay. Let's start with this, if I
11 can get the first tab. This will be 25.

12 - - -

13 (Glasgow Deposition Exhibit 25 marked.)

14 - - -

15 BY MR. KIM:

16 Q. If you could take a look at what's
17 been marked as Exhibit 25. This is Bates number
18 City of Flint_FED_240028.

19 And is this an e-mail that was --
20 that you sent to Duffy Johnson on October 31,
21 2013?

22 A. Yes, it is.

23 Q. And had Daugherty Johnson asked
24 you to essentially predict -- give your best

1 prediction as to what would be the effects of
2 treated Flint River water on the distribution
3 system?

4 A. Yes.

5 Q. And what did you tell him?

6 A. Well, I'll just -- I'll read some
7 from the e-mail here. "Sorry" -- well, I'll
8 skip that one. "About your inquiry of the
9 effect of treated Flint River water on the
10 distribution system, I have heard different
11 arguments. Personally, I don't believe it will
12 have much effect. It all depends on our final
13 water quality, mostly pH and alkalinity."

14 Q. Okay. Was there more?

15 A. There's a little bit more but ...

16 Q. Why don't you read the rest of
17 that.

18 A. Okay. "Most likely we will have a
19 scale-forming water, and this may lead to lots
20 of scale buildup in the system. This may cause
21 reduced flow of piping that is already partially
22 clogged, ultimately affecting pressures and
23 could increase some maintenance on pump station
24 if scale buildup starts to occur in the pumps.

1 "As we operate the plant, we will
2 have to develop some goal for what type of
3 finished water quality we wish to have. The
4 best case is to keep the parameters as close as
5 we can to Detroit water to have minimal effect
6 on the distribution system. But at times, the
7 process will determine what we 'can' do," "can"
8 being in quotation marks.

9 Q. Okay. At this time, at the time
10 of this e-mail, had Duffy Johnson or
11 Daugherty -- I'll just refer to him as Duffy if
12 that's okay with you.

13 A. That's fine, yeah.

14 Q. Had Duffy Johnson told you
15 definitively that the city of Flint was going to
16 be using the Flint River as a water source?

17 A. I'll say he told me we were
18 looking at that avenue. Whether or not he said
19 it was definitive, I don't recall, but ...

20 Q. Okay. Now, you're aware that to
21 use the Flint River as a water source, the city
22 of Flint of was going to need to do upgrades to
23 the water treatment plant and increase its
24 personnel and take other steps to be able to

1 successfully use the Flint River, correct?

2 A. Correct, yes.

3 Q. And you know that those kinds of
4 upgrades and hiring would take time, correct?

5 A. Correct, yes.

6 Q. Is it -- so would it be
7 reasonable, in your ex- -- would it be
8 reasonable to expect that those steps would have
9 to have been done at a -- before the switch
10 itself?

11 A. Yes. I will say yes, steps had
12 started to be taken.

13 Q. Okay.

14 Now, are any of the steps that
15 were -- now, you've testified today as to your
16 recollections as to some of those upgrades and
17 steps that were taken to prepare the Flint water
18 treatment plant to process Flint River water,
19 correct?

20 A. Correct.

21 Q. Are any of those steps
22 incompatible with the city continuing to
23 purchase water from Detroit, taking -- or let me
24 rephrase that -- doing any of those upgrades

1 prevent the city of Flint from staying with
2 the -- staying with the Detroit DWSD and
3 purchasing water from them?

4 A. No, not to my knowledge.

5 Q. So just because the city was
6 upgrading its water plant and engaging in
7 upgrades to its water plant, that doesn't mean
8 that the city had committed to using the Flint
9 River and committed to moving away from Detroit
10 by April of 2014; is that correct?

11 A. I would say that's correct, yes.

12 Q. Okay.

13 Going back to Exhibit 25 here, the
14 main subject -- or not the subject, but the
15 first part of the e-mail is your response to a
16 follow-up question from Duffy; is that correct?

17 A. That is correct.

18 Q. And in that -- in your response,
19 you give him your analysis of what the hardness
20 of the water from Detroit was compared to what
21 you -- what you predicted we could do in Flint;
22 is that correct?

23 A. That is correct, yes.

24 Q. And did you inform him that the

1 water was -- from Detroit was an average of
2 100 milligrams per liter?

3 A. Yes.

4 Q. And did you believe that it was
5 possible to get the city of Flint to
6 130 milligrams per liter?

7 A. Yes. The 130 was kind of the
8 theoretical number we could get to in the city.

9 Q. Now, I guess in layman terms, what
10 kind -- how -- how closely related are those
11 numbers?

12 A. The 100 and the 130?

13 Q. Yes.

14 A. Is that what we're talking about?

15 They're reactively close. I mean,
16 when you talk about hard water versus soft
17 water, you know, you talk about soft water is
18 about 100 milligrams per liter and below, and
19 you don't really start to talk about hard water
20 until you get up to 250 to 300 milligrams per
21 liter of hardness.

22 Q. Okay. Now, what is the effect of
23 softening water?

24 A. Most people look at it -- and

1 myself -- as an aesthetic. So hard water, we're
2 going to remove some of the calcium and
3 magnesium out of the water. Residents might
4 notice this scaling on the inside of their sinks
5 or showerheads that may slowly get clogged over
6 time. But that scale is all mostly -- calcium
7 and magnesium, nothing that's detrimental to a
8 person's health. But it's mainly an aesthetic
9 thing. Or maybe they do a load of dishes in the
10 dishwasher and there's spots on it after the
11 fact with hard water as compared to soft water.

12 Q. Okay. I'm handing you what has
13 been marked as Exhibit 26.

14 - - -

15 (Glasgow Deposition Exhibit 26 marked.)

16 - - -

17 BY MR. KIM:

18 Q. This is Bates number city of
19 FLINT_FED_0107003. And is this an e-mail from
20 you to Duffy Johnson dated April 14, 2014?

21 A. Yes.

22 Q. And does this represent that you
23 were asked to make a comparison as to the -- as
24 to the water that Detroit was providing compared

1 to what we -- the water that the city of Flint
2 would be providing?

3 A. Yes.

4 Q. And did you -- did you do that
5 comparison?

6 A. I do recall doing a comparison at
7 one time. And like I said, before, it was just
8 a -- kind of a standard little Excel
9 spreadsheet, nothing fancy.

10 Q. Okay.

11 A. Just with some comparisons.

12 - - -

13 (Glasgow Deposition Exhibit 27 marked.)

14 - - -

15 BY MR. KIM:

16 Q. Okay. I'm handing you what's been
17 marked as Exhibit 27, city of Flint_FED_0107013.

18 And does this exhibit represent an
19 e-mail that you sent to Duffy Johnson a day or
20 two after the previous e-mail that we
21 referenced?

22 A. Yes.

23 Q. And did this -- does this e-mail
24 include -- consist of essentially a cover e-mail

1 and an attached spreadsheet?

2 A. Yes.

3 Q. And is this spreadsheet -- do you
4 have the spreadsheet in front of you?

5 A. I do. I do.

6 Q. Okay.

7 MR. THOMPSON: What is the Bates
8 number of the spreadsheet?

9 MR. KIM: I believe the
10 spreadsheet was 014. It was produced in
11 its native format so the Bates number
12 doesn't appear on the spreadsheet.

13 BY MR. KIM:

14 Q. Is this the comparison of Flint
15 River water -- processed Flint River water to
16 Detroit water -- Detroit finished water that you
17 provided to Duffy Johnson?

18 A. Yes.

19 Q. Okay. And so we can see that
20 there are a listing of parameters and a
21 comparison between Detroit and Flint; is that
22 correct?

23 A. That is correct.

24 Q. What was the source of your

1 numbers for the Detroit numbers? In the column
2 that's under -- listed under the heading of
3 "Detroit," what was the source for -- what did
4 you use to calculate those numbers or come up
5 with those numbers?

6 A. Yes, that was an average of
7 numbers I would get almost monthly from Detroit.
8 They weren't good at sending them every month.
9 But I would get a single-page document e-mailed
10 to me from Detroit with some of their results of
11 their testing for that month. So I compiled
12 what -- what notifications from Detroit with the
13 numbers I had and kind of took an average of
14 everything.

15 Q. Okay. And what was the source of
16 the numbers that you used for Flint?

17 A. Yeah. The numbers for Flint were
18 based on previous test runs. It looks like
19 mainly collected during 2012 and 2013.

20 Q. Okay. So would these numbers have
21 been generated based on -- prior to the upgrades
22 that were done to the Flint water plant; is that
23 correct?

24 A. That is correct, yes.

1 Q. So, I guess, let's go down the
2 line -- go down the column here. What's the
3 significance of the "Barium" line?

4 A. Barium, that was just one of the
5 results Detroit had. There's regulations on
6 barium. But that was one of the numbers I
7 actually had from Detroit, and I actually had
8 some testing results from our test runs as well
9 from Flint, so I included that on here as well.

10 Q. Okay. In your experience, is the
11 difference between those numbers -- two numbers
12 a significant difference?

13 A. Those numbers, no. They're pretty
14 close.

15 Q. Okay. The next line is "Calcium,"
16 where it says 30 milligrams per liter for
17 Detroit and 50 milligrams per liter for Flint.

18 A. Right, correct.

19 Q. And you say that will vary
20 depending on the softening process. Can you
21 explain why?

22 A. Correct. Well, depending on how
23 well the softening process is going to work,
24 that number -- the softening process -- the way

1 the city of Flint plant was set up, it's a real
2 dynamic process. It could change hourly.

3 So I couldn't really put in a
4 number and say that's what we're going to hit
5 every day, 24 hours a day. It's going to vary,
6 how much lime we're adding, what the
7 characteristics of the Flint River coming into
8 the plant are. So that was kind of just a good
9 average for me to throw into the spreadsheet
10 there.

11 Q. Okay. So in your experience, is
12 the difference between the 30 milligrams a liter
13 and the 50 milligrams a liter a meaningful
14 difference between those two -- between the two
15 sources?

16 A. You know, in my opinion, no, not
17 with calcium.

18 Q. Okay. Chloride, we have a
19 difference between 9 milligrams with Detroit and
20 72 milligrams with Flint.

21 A. Yes.

22 Q. And you say -- and is that going
23 to be a significant difference in the finished
24 water product?

1 A. It's a significant difference
2 number-wise, but with the quality -- to my eyes,
3 chloride is not a regulated contaminant. And
4 the whole result of our chloride increasing so
5 much is due to our coagulant that we used,
6 ferric chloride. We were adding that to the
7 water as a coagulant so there's going to be lots
8 of residual chloride in the water. But not too
9 significant to me. Ferric chloride is a
10 well-known coagulant. It's used a lot of places
11 so ...

12 Q. Okay. So the chlorine-free
13 residual, the difference between 1 milligram per
14 liter and 1.5 milligrams per liter, is that
15 going to be a significant difference in your --

16 A. That's not going to be
17 significant, no.

18 Q. .71 milligrams per liter for
19 fluoride versus .70?

20 A. No, no. And we -- we have the
21 control, and that's also a regulation to have
22 the fluoride concentration right around .7 so a
23 little one way or the other won't affect much.

24 Q. Total hardness, 100 milligrams per

1 liter compared to 160 milligrams per liter?

2 A. Yeah. I -- somewhat significant
3 on an aesthetic quality to me, but --

4 Q. So you say that --

5 A. -- really overall.

6 Q. Okay. So as an aesthetic quality,
7 would that, in -- to your mind, does that
8 difference implicate any kind of safety
9 concerns?

10 A. No, no.

11 Q. So it's restricted only to
12 aesthetic qualities. And what would you
13 consider to be aesthetic qualities?

14 A. Oh, yeah, you know, it could have
15 a little effect on taste. Like I said, it
16 mainly has to do with scale buildup in sinks,
17 toilets, and showerheads, dishwashers, just
18 calcium magnesium scale building up there, but
19 not a health issue in my eyes.

20 Q. I guess comparing the remaining
21 ones, the hardness, noncarbonate, magnesium,
22 nitrate, nitrites, sodium sulfate, and your
23 projections for the total trihalomethanes and
24 the haloacetic acids, are anything in those --

1 any of those projections, to you, significant
2 differentials?

3 A. No, not in my eyes, no.

4 Q. Okay.

5 MR. KIM: We're on 28?

6 Q. Actually, if you can turn to what
7 was previously admitted as Exhibit 24.

8 Now, you said this was the
9 e-mail -- this is the e-mail that you sent on
10 April 17 to Adam Rosenthal; is that correct?

11 A. Correct.

12 Q. And in this e-mail, you -- you
13 were communicating your concerns about the
14 current staffing and about the monitoring
15 schedule; is that correct?

16 A. That is correct.

17 Q. You say that you needed "time to
18 adequately train additional staff and to update
19 your monitoring plans"; is that correct?

20 A. Correct, yes.

21 Q. Now, on the staff issue, this
22 e-mail was sent on April 17, 2014, and so
23 approximately a week later the city switched
24 over to the use of the Flint River; is that

1 correct?

2 A. That is correct.

3 Q. Okay. In that one-week period,
4 did the -- was anything done to address your
5 staffing concerns?

6 A. At this time, it did seem like we
7 did add additional staff a couple weeks before
8 the switch took place.

9 Q. Okay. Specifically, do you
10 remember -- do you remember whether or not
11 authorization for overtime was granted by the
12 personnel who were -- who could authorize such
13 overtime?

14 A. Yes. We had an open door for
15 overtime. There was no questions.

16 Q. Okay. Now, if the -- with that
17 essentially unlimited overtime that you had
18 available to you, was it possible to adequately
19 staff the water plant for operation?

20 A. Yes. Yes, I could have the amount
21 of guys on shift I wanted with overtime, yes.

22 Q. Okay. Were you -- when the water
23 plant went into operation, were you ever denied
24 the ability to have adequate staffing by

1 limiting the overtime?

2 A. No.

3 Q. Okay. And was additional staff
4 hired to alleviate the overtime concerns in the
5 long run?

6 A. Yes. As time went on, more staff
7 was hired.

8 Q. Okay. Now, even with the overtime
9 and with the newly hired staff, at any time was
10 the water plant operated -- was there ever a
11 time when the water plant was being -- was there
12 ever a time when there was not a licensed --
13 where there were not licensed operators or
14 personnel at the water plant?

15 A. Not that I'm aware of.

16 Q. Okay. Now, in regards to the
17 monitoring plans, you say that you wanted to
18 update the monitoring plans in your e-mail; is
19 that correct?

20 A. Yes, that is correct.

21 Q. What would you have done to update
22 the monitoring plans?

23 A. Well, there was a couple different
24 monitoring plans we needed. One was for

1 disinfection byproducts, so our TTHMs.

2 We needed more sites. The other
3 monitoring plan would be the lead and copper
4 monitoring plan, which was changing from 30
5 samples to 100. So we needed to dig in and get
6 some more information.

7 It seems like there was one more
8 monitoring plan I was worried about, but it's
9 not coming to mind right now.

10 Q. Where would these monitoring plans
11 have come from?

12 A. We would -- the city would develop
13 them and then send them to the -- to the state
14 for approval.

15 Q. Okay. And were you waiting for
16 state approval for the monitoring plans?

17 A. No, not at that time, because I
18 hadn't -- we hadn't prepared them. I had just
19 got the list of what we needed to do.

20 Q. And when were those monitoring
21 plans submitted to the state?

22 A. I can't say. They were probably
23 all submitted at a different time, but I can't
24 say offhand without my records.

1 Q. Isn't it true that the -- that --
2 we've discussed corrosion control. Several of
3 my colleagues have brought this up. And you
4 testified that the -- that staff from the MDEQ
5 told you that the city was going to be required
6 to complete two rounds -- two six-month
7 monitoring periods before the appropriate level
8 of corrosion control could be determined; is
9 that correct?

10 A. That is correct.

11 Q. Now, the city -- when you were in
12 charge of the lab, the city tested the water --
13 finished water that was produced by the water
14 plant; is that correct?

15 A. That is correct.

16 Q. And it would test the water for
17 the levels of various chemicals and --
18 essentially to monitor the treatment process; is
19 that correct?

20 A. Correct, yes.

21 Q. And the -- the things that you
22 were testing for were specified in a directive
23 from the MDEQ; is that correct?

24 A. That is correct. That would be

1 delegated on a yearly monitoring schedule that
2 the state would send to the city.

3 Q. Okay. Now, would the addition of
4 orthophosphates be something that would be
5 listed in that yearly monitoring schedule?

6 A. Yes. If it was in there, it would
7 be listed and would tell us the frequency of
8 testing, how often to test for it and where to
9 test.

10 Q. Okay. Now, if the -- if the -- if
11 the annual monitoring schedule did not include
12 those orthophosphates, could the city have added
13 those phosphates without the approval of the
14 MDEQ?

15 A. No, not without the approval. Any
16 change to a treatment process needs written
17 approval.

18 Q. Okay.

19 Now, we've discussed
20 orthophosphates as a measure -- as one means to
21 implement corrosion control; is that correct?

22 A. That is correct.

23 Q. What happens if you -- now, the --
24 so if corrosion control had been required, the

1 level of orthophosphates would have been
2 specified in the monitoring schedule; is that
3 correct?

4 A. I don't know if the true level --
5 they would have given us a recommendation on a
6 level to add, but mainly in the monitoring
7 schedule, it would be a frequency of testing and
8 where you test.

9 Q. Okay. What happens if you add
10 excessive amounts of orthophosphates to drinking
11 water?

12 MR. KUHL: Object to form.

13 MR. MORRISSEY: Object to form.

14 Q. What is likely to happen if you
15 add excessive amounts of orthophosphates to
16 drinking water?

17 MR. MORRISSEY: Object to form.

18 A. Yeah, it's hard for me to predict.
19 I'll say there could be other ramifications of
20 adding phosphates at extreme levels. When I
21 think about excessive phosphates, I start to
22 think, you know, phosphate is a food source for
23 microorganisms. So there could be issues in
24 that aspect, but that's, yeah, hard for me to

1 predict.

2 Q. Okay. What kind of issues would
3 you -- what kind of issues are you referring to
4 with it being an organic food source?

5 A. I would -- you know, it's food for
6 some of the microorganisms in the distribution
7 system. A lot of people think of water as
8 clean, but there's its own little living --
9 what's the word I'm looking for here?

10 There's a whole nother -- I don't
11 know -- I want to say -- I'm at a loss for a
12 word here. I apologize, Mr. Kim. It's like a
13 whole nother little ecosystem inside the pipes I
14 guess is what I'm trying to look for. So
15 there's living things in there, and the
16 phosphorus would be -- could be a food source
17 potential.

18 Q. Okay. I'm going to jump around a
19 little bit here. You're still -- you're still
20 currently licensed as a -- are you still
21 currently licensed as a water plant operator?

22 A. Yes, I am.

23 Q. And what kind of licensure do you
24 currently hold?

1 A. I currently hold an F-1
2 certification for treatment and an S-3 for
3 distribution.

4 Q. Okay. So an F-1 certification for
5 treatment is the highest level of certification
6 that's offered by the state of Michigan; is that
7 correct?

8 A. That is correct.

9 Q. And you've maintained that
10 licensure continuously from the time you were
11 with the city of Flint -- from the time you left
12 the city of Flint until the present day; is that
13 correct?

14 A. That is correct.

15 Q. So it's important for you to stay
16 up to date with the regulatory developments in
17 that area; is that correct?

18 A. Absolutely, yes.

19 Q. And do you do so?

20 A. I try my best, yes.

21 Q. Now, earlier you testified that
22 you were surprised when the MDEQ told you that
23 only -- that before the -- before an optimized
24 corrosion control requirement could be imposed,

1 that they were going to have the city of Flint
2 do two six-month monitoring periods; is that
3 correct?

4 A. That is correct.

5 Q. Did you ever question the MDEQ's
6 authority to interpret the regulations in that
7 fashion?

8 A. No, I did not.

9 Q. Did the MDEQ's interpretation of
10 the -- interpretation of the applicable
11 regulations seem to fall within their purview as
12 you understood it?

13 A. I would say yes.

14 Q. Now, the regulations that were
15 cited by the -- or that were referred to by the
16 MDEQ when they required two six-month monitoring
17 periods before setting an optimized corrosion
18 control level, has there been any clarifications
19 or modifications of those underlying regulations
20 since April 2014?

21 A. I can't -- I can't say that I -- I
22 believe so. I'm going to say not that I'm aware
23 of.

24 Q. Are you aware of any guidance from

1 the EPA regarding those regulations?

2 A. Not specifically I hate to say.

3 Q. Okay.

4 - - -

5 (Glasgow Deposition Exhibit 28 marked.)

6 - - -

7 BY MR. KIM:

8 Q. I'm handing to you what is marked
9 as Exhibit 28. This is city of
10 Flint_FED_0112441.

11 Is this an e-mail that you sent
12 the Jason Lorenz on September 2, 2015?

13 A. Yes.

14 Q. And were you -- were you
15 provided -- and who is Mr. Lorenz?

16 A. He was the -- oh, what do they
17 call him? Kind of our communications -- I'm
18 trying to think of his title. He would put
19 out --

20 Q. Was he the city's public
21 information officer?

22 A. There you go. Public information
23 officer sounds right.

24 Q. Okay. And were you providing him

1 with information about the city's sampling under
2 the Lead and Copper Rule?

3 A. Yes.

4 Q. And were you also explaining to
5 him the requirements -- what you understood to
6 be the requirements that were in place requiring
7 the city to deduct two six-month rounds of
8 testing?

9 A. Yes.

10 Q. So here we can see that you
11 informed Mr. Lorenz that the city was required
12 to collect samples for a six-month period from
13 July 1, 2014 through December 31, 2014; is that
14 correct?

15 A. That is correct.

16 Q. And then you state what the --
17 what was collected and what the testing results
18 were?

19 A. Yes.

20 Q. And you refer to a 90th percentile
21 value; is that correct?

22 A. That is correct.

23 Q. And then you give that similar
24 information for the second six-month period from

1 January 1, 2015 through June 30 of 2015; is that
2 correct?

3 A. Yes.

4 Q. Why did the -- now, the city
5 switched over to the Flint River in April of
6 2014; is that correct?

7 A. That is correct.

8 Q. So that was in the middle of what
9 would be a normal six-month sampling period; is
10 that correct?

11 A. Yes.

12 Q. So the normal sampling periods run
13 from January to June of every year; is that
14 correct?

15 A. Yes.

16 Q. And then from July to December of
17 every year?

18 A. Yes. To my knowledge, yes.

19 Q. And so were you directed to --
20 that the city's sampling period would start in
21 July and end in December?

22 A. Yes.

23 Q. And who directed you to do that?

24 A. The DEQ.

1 Q. So it was the DEQ that said that
2 the city's two six-month sampling periods would
3 not start until July of 2014 running through the
4 end of the year and then the first half of 2015?

5 A. That is correct, yes.

6 Q. Now, the -- now, were these
7 samples collected using any particular
8 procedures?

9 A. Yes. My lab with the water plant
10 was not certified to test for lead and copper so
11 we used the MDEQ lab based in Lansing. So they
12 would send us the sample bottles, and I could
13 also pull a set of instructions off the DEQ
14 website. So I could hand a resident the sample
15 bottle and the instructions on how to collect
16 it.

17 Q. Okay. So were residents provided
18 with the sample bottles that were provided to
19 you by the MDEQ's lab?

20 A. Yes.

21 Q. And were they provided with
22 instructions -- the instructions that you
23 received from the MDEQ?

24 A. Yes.

1 - - -

2 (Glasgow Deposition Exhibit 29 marked.)

3 - - -

4 BY MR. KIM:

5 Q. Okay. I'm giving you what has
6 been marked as Exhibit 29.

7 This is Bates numbers city of
8 Flint_FED_0073298.

9 And is this an e-mail from you to
10 Howard Croft dated September 21, 2015?

11 A. Yes.

12 Q. Did you intend to send this e-mail
13 to Marc Edwards?

14 A. No.

15 Q. Okay. You see at the top there,
16 at the --

17 A. Oh, I see it.

18 Q. -- top of the page, where you
19 addressed it to Marc?

20 A. Yes.

21 Q. So did you intend to -- does that
22 make you think that you intended to send this to
23 Marc Edwards as opposed to Howard Croft?

24 A. Yeah, now that I look at the,

1 yeah, carbon copy there, yeah, I must have.

2 Q. Okay. And you see that basically
3 in the e-mail chain here that Howard Croft
4 appears to have forwarded or replied or included
5 you on a reply to a message that he sent to Marc
6 Edwards?

7 A. Yes.

8 Q. And you know who Marc Edwards is,
9 correct?

10 A. Correct, yes.

11 Q. What's your understanding of Marc
12 Edwards' role in all of this?

13 A. Well, he come into the picture not
14 long after, I believe, Ms. Walters' episode.
15 And he originally contacted me via e-mail, and I
16 couldn't tell you when, maybe March, April of
17 '15, letting me know that he was conducting lead
18 and copper testing. I told him we'd help him
19 however we could, that I was having issues
20 getting enough samples back, but he was letting
21 me know that he was doing an investigation of
22 his own.

23 Q. Okay. Now, here you stated the --
24 in your e-mail you stated that "the DEQ

1 calculated the 90th percentile on the last two
2 rounds of sampling."

3 Do you see that?

4 A. Yes.

5 Q. And is that a true statement?

6 A. Yes.

7 Q. Is that the general practice? Is
8 that the general practice, that the DEQ would
9 calculate the 90th percentile on samplings?

10 A. From my experience, yes, over the
11 years. I would just send them the form -- the
12 LCR form of all the results, and they would
13 usually calculate the 90th percentile and send a
14 letter back to the city stating what our 90th
15 percentile value was.

16 Q. Okay. And why is the
17 90th percentile meaningful?

18 A. It's just meaningful for the Lead
19 and Copper Rule. That's how the regulations
20 were based, and your reporting is based off the
21 90th percentile.

22 Q. So if the 90th percentile is
23 meaningful, does having a single result have --
24 require any kind of action under the applicable

1 laws or regulations?

2 A. Not to my understanding, no.

3 Q. Okay.

4 Let me make sure these are in the
5 correct order here.

6 - - -

7 (Glasgow Deposition Exhibit 30 marked.)

8 - - -

9 BY MR. KIM:

10 Q. Okay. I'm handing you what I've
11 marked here as Exhibit 30. This is city of
12 Flint_FED_0023232.

13 And does this e-mail include a
14 message that you sent describing your
15 interactions with LeeAnne Walters and 212
16 Browning?

17 A. Yes.

18 Q. And does this describe the results
19 that you got from testing the water at her
20 house?

21 A. Yes.

22 Q. Okay. And so do you remember when
23 you took those -- when you took those tests or
24 took those water samples from 212 Browning?

1 A. Yes. It was sometime in February.
2 I can't remember the date.

3 Q. Okay. And the result -- the
4 individual results that you got back from
5 LeeAnne Walters were high, as you testified
6 earlier; is that correct?

7 A. That is correct.

8 Q. So what did you do after those
9 initial results came back showing that her house
10 had an extreme -- I can't remember the exact
11 words you used, but had high test results come
12 back?

13 A. Yeah. So after the initial higher
14 test result, we had her test again. And then
15 the -- that test come back even higher than the
16 original level of 104.

17 Q. Okay. Did you -- did you do any
18 testing at the other homes in her neighborhood?

19 A. Yes. After the original 104 part
20 per billion result, the day -- that day or the
21 next day, I went over and took her another
22 sample bottle so she could collect another
23 sample, and I myself walked up and down the
24 street knocking on doors and trying to get ahold

1 of neighbors to see if they would collect
2 samples as well for us, to see if this was a --
3 kind of a singularity problem or something that
4 was affecting the whole street.

5 Q. Did they -- did they collect
6 samples?

7 A. Only two residents did here.

8 Q. And do you remember what the
9 results of those -- of the neighbors to
10 212 Browning was?

11 A. I don't recall the exact level,
12 but they were underneath the action level of
13 15 parts per billion.

14 Q. Okay. Did you conduct any further
15 investigation or analysis as to what the likely
16 cause of the high test results at 212 Browning
17 were?

18 A. Well, just using a little bit of
19 knowledge I had, I knew her internal plumbing
20 was all plastic. So that led me to believe it
21 was the service line.

22 Q. And so was there anything out of
23 the ordinary about the service line at 212
24 Browning?

1 A. Yes. It was -- it seemed like the
2 house Ms. Walters had lived at was one of the
3 first in that neighborhood. The service line
4 didn't come out the front of her house to the
5 street right in front. It ran, I want to say,
6 at least 100 feet in another direction to a side
7 street and underneath another house that just
8 had a cement slab, no basement.

9 Q. And is that unusual for a
10 residential service line?

11 A. Yes. It's highly unusual.

12 Q. Did you draw any conclusions about
13 the age of the service line?

14 A. Well, just the fact that it was
15 run to a different street told me that it was an
16 older service line put in prior to the street
17 that her driveway was on was put in. So it
18 reflected something from the time past, I will
19 say, you know, before that neighborhood was
20 fully constructed.

21 Q. Okay. So if I can -- tell me if
22 this is an accurate summary: After determining
23 that the test results at 212 Browning were high,
24 you determined that the neighbors that you could

1 get samples from did not have -- were not having
2 any -- were not having test results that were
3 even remotely close to those that you were
4 getting from 212 Browning; is that correct?

5 A. That is correct.

6 Q. And then you conducted additional
7 investigation and determined that the service
8 line to 212 Browning, where Ms. LeeAnne Walters
9 resided, was an extremely long service line
10 compared to other residential service lines that
11 you're familiar with?

12 A. That is correct.

13 Q. And that the line was likely to be
14 of significantly increased age compared to the
15 service lines nearby?

16 A. Yes, that is correct.

17 Q. Was that service line replaced?

18 A. Yes, to my knowledge, it was.

19 Q. And once it was replaced, were
20 there any -- were there any further negative --
21 well, were there further test results of
22 excessive lead?

23 A. Not to my knowledge, no.

24 Q. Okay. If I can jump around a

1 little bit more. Sorry for how I'm jumping
2 around here in time periods.

3 A. Oh, you're fine.

4 Q. You were asked earlier in regards
5 to the LAN -- to the contract with LAN whether
6 you authorized them to do certain things or
7 reviewed their various proposals.

8 Do you remember those questions?

9 A. Vaguely, yes.

10 Q. Was that ever one of -- was that
11 part of your job duties in 2013?

12 A. No.

13 Q. Was that your -- was that part of
14 your job duties in 2014?

15 A. No.

16 Q. Did you regularly have any kind of
17 interactions with LAN during that time period?

18 MR. GAMBLE: Object to form.

19 A. I wouldn't say regularly. With
20 going through all our upgrades, usually a member
21 or two from LAN was around the plant here and
22 there, and at times I would bump into them and
23 have discussions but not nothing that really
24 jumps out as being regular.

1 Q. Okay. You described the
2 relationship with the MDEQ and with their staff
3 as being like a coach and like cops. Is that --
4 was that accurate?

5 A. Yes.

6 Q. And you saw them as being coaches
7 because they would provide advice, correct?

8 A. Correct, yes.

9 Q. Is there any other reasons why you
10 saw them as coaches?

11 A. Well, yeah, I guess I could say --
12 when I think about it, I'm still laughing that I
13 used that description of it, but, yeah, they
14 would help, in my eyes, to interpret some of the
15 rules from the Safe Drinking Water Act, you
16 know. I don't know, probably everybody in this
17 room has now seen the Safe Drinking Water Act.
18 Now it looks like one of these big binders.

19 But as with anything and, I guess,
20 law like you guys practice, there could be
21 different interpretations of items. So I would
22 rely on them to help clarify things if I had
23 questions.

24 Q. Okay. And you also saw them to

1 have a role as cops. Can you describe what you
2 meant by that.

3 A. Yeah. In that aspect it makes me
4 think of violations or if there's rules we're
5 not following, that they've stipulated to us
6 they can, you know, bring a little discipline
7 down on us in a sense.

8 Q. Okay. Did you draw a distinction
9 between those two roles in your view of the
10 MDEQ, or were they occurring simultaneously?

11 MR. MARKER: Object to the form.

12 Q. Did you see that their role as --
13 let me rephrase.

14 Did you see that their role as a
15 coach was distinct and separate from their role
16 as cops?

17 A. Not particularly. I would think
18 it was almost a combination.

19 Q. Okay. So as a combination, did
20 you feel that that -- that their suggestions
21 carried great weight?

22 A. Yes, you could say that.

23 Q. Did you view that -- their
24 suggestions as being optional?

1 A. No, not whatsoever. They -- well,
2 when you're saying "suggestions," if something
3 was brought across to me as a suggestion or
4 recommended treatment practices, I took it -- I
5 took it to heart, and I would try my best to
6 institute it.

7 Q. Okay. I'd like to address at
8 least one more area here.

9 In the fall of 2014, did you
10 become aware of Legionella issues anywhere in
11 the city of Flint?

12 A. I did.

13 Q. And where were those Legionella
14 issues occurring?

15 A. At McLaren Hospital in Flint.

16 Q. Okay. How did you first become
17 aware of those issues?

18 A. I was contacted by Liz Murphy, who
19 was, I think, an assistant to the emergency
20 manager -- I wasn't sure of her title -- in
21 regards to issues at McLaren Hospital, and
22 McLaren was having a little meeting about it,
23 and the city sent me to attend the meeting.

24 Q. Okay. And who was at this

1 meeting?

2 A. Oh, there was probably four or
3 five individuals from McLaren Hospital. The
4 only other person I remember is Jim Henry from
5 the Genesee County Health Department.

6 Q. Okay. Do you remember the names
7 of any of the individuals from McLaren?

8 A. I can't say that I do offhand
9 here.

10 Q. Okay. What was discussed at this
11 meeting? Well, strike that.

12 Let me -- do you remember the
13 positions of any of the persons from McLaren?

14 A. One of the individuals was like
15 their building or maintenance manager, and the
16 others, I can't say. They looked a little more
17 professional.

18 Q. Okay. Do you remember anything
19 else about the roles that the McLaren personnel
20 played or held or --

21 A. I do not recall.

22 Q. Okay. So I guess back to the
23 question that I interrupted you on. I apologize
24 for that.

1 A. No worries.

2 Q. What was discussed at this
3 meeting?

4 A. McLaren had an issue -- they had
5 done some testing in their facility, in their
6 water system, and had found Legionella in a
7 couple different locations throughout the
8 hospital. So I think this had been maybe after
9 their initial round of testing. I'm trying to
10 recall.

11 But, yeah, they had found one
12 floor a showerhead, another floor a faucet. And
13 they were -- it was almost just a little more of
14 a think tank, bring everybody together to see if
15 we can figure out what's happening. They asked
16 me a few questions. They knew we had switched
17 water sources. They notified me that they had
18 the ability to isolate their system and
19 chlorinate their system within the hospital.
20 And that was their next step, was to chlorinate
21 and then take more samples to see if they had
22 taken care of the situation.

23 Q. Okay. Was there anything else
24 that you remember being discussed at this

1 meeting?

2 A. Yeah, I knew they had -- no,
3 just -- it seemed like they -- I provided them
4 with some information on chlorine residuals in
5 the area. And they had talked a little more
6 about their testing. They were testing the
7 water coming into their facility from the city
8 of Flint lines and then testing throughout the
9 facility. At that time of that meeting, they
10 didn't have any positive hits on what was coming
11 into their facility, but they were just
12 exploring all avenues to try to figure out the
13 cause.

14 Q. Did you write up a summary of that
15 meeting at that time or shortly thereafter?

16 A. I did at that time to report back
17 to Ms. Murphy in the EM's office.

18 Q. And did you do that by e-mail?

19 A. Yes.

20 - - -

21 (Glasgow Deposition Exhibit 31 marked.)

22 - - -

23 BY MR. KIM:

24 Q. I'm handing you what has been

1 marked as Exhibit 31. This is CROFT -
2 0000001324.

3 Is this the e-mail that you wrote?

4 A. Yes, it appears to be, yes.

5 Q. Okay.

6 And do you see the statement
7 that's underlined in that first paragraph, where
8 it says, "There has been no evidence of
9 Legionella in the water coming into the hospital
10 from the city supply during their sampling
11 events"?

12 A. Yes.

13 Q. And is that what you referred to
14 earlier when you were talking about when you --
15 in your last answer as to subjects that were
16 being discussed?

17 A. Yes.

18 Q. Okay. And in the second
19 paragraph, do you see that the first sentence
20 there says, "From the discussions with the
21 health department and the hospital staff, there
22 is still no correlation of data that can link
23 the increased cases of Legionella to the
24 municipal water supply"?

1 A. Yes.

2 Q. And do you recall that being
3 discussed at the meeting at McLaren?

4 A. Yes.

5 Q. And so this wasn't just McLaren
6 personnel saying that there was no evidence of
7 Legionella. This was also the Genesee County
8 Health Department's; is that correct?

9 A. Yes.

10 Q. And then you mentioned -- the next
11 underlined sentence there is "The data we
12 collect daily from the water plant will continue
13 to verify that there is no evidence of
14 Legionella in the treated water leaving the
15 water plant."

16 Do you see that sentence?

17 A. Yes.

18 Q. So you were collecting data -- you
19 were testing the water that was leaving the
20 water plant on a daily basis; is that correct?

21 A. That is correct.

22 Q. And do you recall whether any of
23 the daily testing after that time showed that
24 there was Legionella in the treated water

1 leaving the water plant?

2 MS. SMITH: Objection; foundation.

3 A. Yes, there was -- there was no
4 evidence of Legionella, although I have to
5 stipulate that by saying we didn't have a
6 specific test to look for Legionella.

7 Legionella is a -- can be
8 considered under a group of bacteria that we
9 call heterotrophic bacteria. So we were
10 certified to do HPC, a heterotrophic plate
11 count, but with our levels of chlorine leaving
12 the water plant and clean HPC, or heterotrophic
13 plate count, bacteria testing, that's how I come
14 to that conclusion that no Legionella was
15 leaving the water plant.

16 Q. Okay. As a non-scientist, let me
17 attempt to summarize, and please tell me if this
18 is accurate or not.

19 The city had no means for testing
20 specifically for the Legionella -- for
21 Legionella bacteria; is that correct?

22 A. That is correct.

23 Q. The city did have the capability
24 to test in general for the class of bacteria

1 that Legionella is a part of.

2 A. Correct.

3 Q. And those tests would have
4 revealed that Legionella was there, but they
5 wouldn't have been able to identify it as
6 Legionella.

7 MS. SMITH: Objection.

8 A. Correct.

9 MS. SMITH: Form and foundation.

10 Q. And as the -- at the time you were
11 the lab supervisor; is that correct?

12 A. That is correct.

13 Q. And this was testing that you were
14 trained and experienced in doing?

15 A. Yes.

16 Q. And if it was not you personally
17 doing these tests, your staff was trained in how
18 to conduct those kinds of tests?

19 A. Yes.

20 Q. And so what you're saying is that
21 after this meeting, the daily testing continued
22 and there was no evidence that there was
23 bacteria leaving the plant --

24 A. That is correct.

1 Q. -- that would have captured
2 Legionella bacteria within that testing?

3 MS. SMITH: Objection.
4 Foundation.

5 MR. DAWSON: Where was this
6 testing being done?

7 Q. Where was this testing being done?

8 A. At the water plant. Before the
9 water left the plant.

10 - - -

11 (Glasgow Deposition Exhibit 32 marked.)

12 - - -

13 BY MR. KIM:

14 Q. I'm handing you what's been marked
15 as Exhibit Number 32. This is CROFT -
16 0000001504.

17 MR. KIM: It's six zeros followed
18 by 1504.

19 Q. Is this an e-mail that's dated
20 March 17, 2015?

21 A. Yes.

22 Q. Is this from Stephen Busch at the
23 DEQ?

24 A. Yes.

1 Q. And were you a recipient of this
2 e-mail?

3 A. Yes.

4 Q. And in this e-mail, does the MDEQ
5 acknowledge that there is no direct evidence of
6 Legionella in the city's public water system?

7 A. Yes.

8 Q. And did you have any reason to --
9 had you -- had any test results that you had
10 received since November of 2014 caused you to
11 question that conclusion?

12 A. No.

13 Q. Did you regularly have discussions
14 with any of the emergency managers that were
15 appointed to take control of the city of Flint?

16 A. No, I don't remember one instance.

17 Q. So you didn't have regular
18 discussions and you're saying that you didn't
19 have any discussions with the -- any of the
20 emergency managers; is that what you're saying?

21 A. That's what I'm saying, yes.

22 Q. So you don't recall having any --
23 having any discussions with Darnell Earley?

24 A. No.

1 Q. With Gerald Ambrose?

2 A. No.

3 Q. Ed Kurtz?

4 A. No.

5 Q. Michael Brown?

6 A. No. I forgot we had that many.

7 But anyway, sir.

8 Q. And you've stated that you've
9 reported certain things to Howard Croft --

10 A. Yes.

11 Q. -- as the director of public
12 works. And you said that you've reported things
13 to Duffy Johnson as the utilities administrator
14 when he held that position; is that correct?

15 A. That is correct.

16 Q. Do you know whether or not
17 either -- well, let's just do one at a time.

18 Do you know whether or not Howard
19 Croft was receiving advice from other -- from
20 other individuals?

21 A. I do not.

22 Q. Do you know whether or not Duffy
23 Johnson was receiving advice from other
24 individuals?

1 A. I do not.

2 Q. Would you have expected them to
3 get information from persons besides yourself?

4 A. Yes.

5 Q. Would you have expected them to
6 get information -- would you have expected
7 Howard Croft to get information from persons
8 besides yourself?

9 A. Yes.

10 Q. And would you have expected Duffy
11 Johnson to get information from persons besides
12 yourself?

13 A. Yes.

14 Q. Were they -- did they -- now, you
15 testified earlier that you disagreed with some
16 of the decisions that were made by those
17 individuals; is that correct?

18 A. That is correct.

19 Q. Did you ever discuss with them why
20 they made those decisions?

21 A. No, I can't say that I did.

22 Q. Were -- was Duffy Johnson in the
23 practice of explaining why he would make
24 decisions to you?

1 A. No.

2 Q. I guess for completeness, was
3 Howard Croft in the practice of explaining why
4 he would make various decisions to you?

5 A. No.

6 Q. Were they obligated to do so?

7 A. No.

8 Q. Did you ever report any of your
9 concerns directly to Dayne Walling? Do you know
10 who Dayne Walling is, first?

11 A. Yes, I knew Dayne was our mayor at
12 a time there.

13 Q. Okay. Do you recall ever
14 reporting any of your concerns or issues to
15 Dayne Walling directly?

16 A. I do not.

17 Q. Now, Brent Wright in his
18 deposition testified as to the kind of basic
19 structure of the utilities division of the
20 department of public works.

21 And you're familiar with that
22 structure; is that correct?

23 A. Yes.

24 Q. Because you were the utilities

1 administrator after Duffy Johnson retired; is
2 that correct?

3 A. That is correct.

4 Q. So Brent Wright described the kind
5 of -- and also Duffy Johnson described the
6 structure as having essentially three
7 components. They described it as the water
8 treatment plant, the distribution system, and
9 the wastewater system; is that correct?

10 A. That is correct.

11 Q. Now, when you were in charge of
12 the water treatment plant's laboratory, did you
13 have any responsibilities towards the
14 distribution system?

15 A. No, none.

16 Q. Did you have any responsibilities
17 toward the wastewater system?

18 A. No.

19 Q. Now, at the time that you were the
20 lab supervisor, you were licensed as an F-1 and
21 were the water plant -- treatment plant's
22 operator of record; is that correct?

23 A. That is correct.

24 Q. And the person who was in charge

1 of the water treatment plant was on paper Brent
2 Wright; is that correct?

3 A. That is correct.

4 Q. And you understand that Brent
5 Wright did not have an F-1 license?

6 A. Yes, that is correct.

7 Q. So how did the two -- how did the
8 two of you split -- how do you recall the two of
9 you splitting the responsibilities for the water
10 treatment plant?

11 A. Well, we kind of decided -- after
12 I attained my F-1, Brent was already in that
13 position. I didn't care for the administrative
14 aspect of it as much as the true nitty-gritty
15 and the operation. So he tended to handle most
16 of the administrative work. And when it come
17 down to operating the plant, those calls were
18 mine.

19 Q. What would you consider to be
20 administrative work?

21 A. That's a good question. That
22 entails almost anything that didn't have to
23 immediately do with the operation of that plant.
24 So it could be dealing with the unions, setting

1 up interviews for employees, some correspondence
2 with the state. I would leave all that to
3 Brent.

4 Q. Okay. As the lab supervisor and
5 as the operator in charge, did you review -- did
6 you have the primary responsibility for
7 reviewing contracts with contractors, or was
8 that something that was Brent Wright's
9 responsibility?

10 A. No, I would have set that on the
11 administrative side. That would have been
12 Brent's responsibility.

13 MR. KIM: Can we go off the record
14 for three minutes? I just want to
15 double-check something. I may be done
16 here.

17 THE VIDEOGRAPHER: We're going off
18 the record at 3:45 p.m.

19 (Recess taken.)

20 THE VIDEOGRAPHER: We are back on
21 the record at 3:57 p.m.

22 BY MR. KIM:

23 Q. Okay. Just a few more matters
24 that I wanted to discuss, Mr. Glasgow.

1 We've discussed the lead and
2 copper reports and sampling that the city
3 conducted and -- from June -- or July to
4 December of 2014 and January to June of 2015.

5 Do you remember that?

6 A. Yes.

7 Q. Okay. Now, the city collected the
8 100 samples required for the June -- July
9 through December 2014 period; is that correct?

10 A. That is correct.

11 Q. Do you remember exactly how many
12 samples the city collected at that time?

13 A. It wasn't much over 100, maybe one
14 or two extra, if any. I can't -- I don't recall
15 without seeing the report. I sent every --
16 every result we got I sent to the state, so ...

17 Q. Okay. So that was going to be my
18 next question, was every result sent to the
19 state and --

20 A. Yes.

21 Q. It was.

22 Now, in the January through June
23 of 2015 time period, it's true -- I believe you
24 said that they reduced the number of samples the

1 city was required to collect; is that correct?

2 A. Yes.

3 Q. And why did they do that?

4 A. I believe that was based on the
5 city's population. The number of samples that
6 we needed were supposedly based on the
7 population.

8 Q. Okay. And I should clarify. In
9 that -- my question, "they," did you understand
10 that I was referring to the MDEQ?

11 A. Yes, I did.

12 Q. Okay. Or what was then known as
13 the MDEQ?

14 A. Yes.

15 Q. And did you ask them to reduce the
16 number of samples that the city was going to be
17 required to collect?

18 A. No, no. I'd actually sent an
19 e-mail to Mr. Rosenthal stating that I was
20 worried because we were short on samples. We
21 weren't going to hit our 100. I didn't have a
22 lot of takers in the community for that second
23 round of sampling.

24 Q. Okay. Now, isn't it true that in

1 the -- in that second round of sampling, the
2 MDEQ -- staff from the MDEQ told you to remove
3 some number of samples?

4 A. Yes.

5 Q. And did they give you a reason why
6 they were telling you to do that?

7 A. Yes, they did.

8 Q. I guess, who at the MDEQ were you
9 communicating with about that issue?

10 A. It was Mr. Prysby and Mr. Busch.

11 Q. Okay. And what reasons did they
12 give you why certain samples should be
13 disregarded?

14 A. One sample was due to the fact
15 that there was a filtration system on their
16 plumbing. The other sample was the fact that it
17 was a business. It wasn't a residential home.

18 Q. And based on your understanding of
19 the laws -- applicable laws and regulations, was
20 that a reasonable request?

21 A. I understood where it was coming
22 from.

23 Q. Based on your understanding of the
24 laws and regulations, did that -- were those

1 requests justified by the law -- by those laws
2 and regulations?

3 MR. MARKER: Object to form.

4 A. I'll sound like a broken record,
5 but I understood where it was coming from in the
6 language of the Lead and Copper Rule.

7 Q. Okay.

8 Did you know exactly what the
9 result of removing those samples would be?

10 A. I did not know exactly. I knew it
11 would have been an effect but ...

12 Q. What did you know -- what kind of
13 effect did you know that would have on the
14 sampling results for that test period?

15 A. I knew that that would affect the
16 90th percentile value for lead.

17 Q. Now, did you know how that would
18 affected the 90th percentile?

19 A. No, because I never bothered to
20 calculate it.

21 Q. And was that something that you
22 would normally calculate?

23 A. No.

24 Q. So that was something that the

1 MDEQ -- you would rely upon the MDEQ to
2 calculate; is that correct?

3 A. That is correct.

4 Q. Okay.

5 Now, do you recall having any
6 interact- -- in the February 2015 through April
7 of 2015 time frame, do you recall having any
8 interactions with personnel from Veolia?

9 A. I remember personnel from Veolia
10 being at the water plant using my lab for some
11 testing, but I didn't really have any in-depth
12 conversation with them.

13 Q. Okay. Do you remember which
14 personnel that was?

15 A. No, I couldn't -- I don't think I
16 could come up with a name even if I heard it.

17 Q. Did those personnel tell you
18 anything about the results that they were
19 seeing?

20 A. No.

21 Q. Did they ask you to provide any
22 information?

23 A. Yes, they did ask for some data.

24 Q. And what kind of data did they ask

1 you for?

2 A. It was kind of our daily
3 operational data through the plant. So the
4 plant process data and -- like in terms of what
5 our chemical feeds were and, you know, hardness,
6 softness, incoming data from the river, a bunch
7 of different things that we would compile daily
8 anyway.

9 Q. Okay. Now, if I can direct your
10 attention to Exhibit 15 again. This was Bates
11 number COF_FED_0628049.

12 A. Okay.

13 Q. The water quality report.

14 A. Uh-huh.

15 Q. Now, do you remember when you -- I
16 believe you said that you saw this report at
17 some point; is that correct?

18 A. Yes.

19 Q. Do you remember when you first saw
20 this report?

21 A. I'm going to say it was sometime
22 in the summer of 2015. I was getting on
23 Mr. Johnson's case. I knew Veolia was in here,
24 and I had never seen -- seen a summary of their

1 report, so I kept bothering him to get me a
2 copy.

3 Q. Okay. So you were not provided
4 with a copy of this report when it was first --
5 you don't believe that you were provided with a
6 copy of this report when it was first
7 disseminated to the city, do you?

8 A. No, I do not.

9 Q. Okay. Did anybody ever ask you to
10 review this report? Did anybody -- well, let me
11 rephrase that. In the spring or summer of 2015,
12 did anybody from the city ask you to review this
13 report?

14 A. Not that I recall.

15 Q. Did anybody from the -- did Duffy
16 Johnson ask you to review this report?

17 A. No.

18 Q. Did Howard Croft ask you to review
19 this report?

20 A. No.

21 Q. Did Dayne Walling ask you to
22 review this report?

23 A. No.

24 Q. Did Darnell Earley or Gerald

1 Ambrose ever ask you to review this report?

2 A. No.

3 Q. Okay.

4 If I can direct your attention to
5 page 5 of this report under the bullet point
6 labeled "Corrosion Control."

7 A. Okay.

8 Q. If you can read that paragraph.
9 Let me know when you're done.

10 A. Okay.

11 All set there, Mr. Kim.

12 Q. Okay. Do you see anything in
13 there that ties the corrosion control issue to a
14 water safety issue as opposed to a water quality
15 issue? And, I guess, let me specify. Do you
16 understand that a water quality issue would
17 essentially be related to aesthetic
18 characteristics of the water, whereas water
19 safety issue would be something related to the
20 health and safety of the consumers of the water?

21 A. I do, yes.

22 Q. Okay. Now, do you see anything in
23 there that ties the corrosion control factors as
24 they're described there to water safety issues?

1 A. No, I do not, not in that
2 paragraph, no.

3 Q. Okay. And, again, just to -- and
4 nobody asked you to review that?

5 A. Correct, no.

6 Q. Would you disagree that -- that
7 corrosion control is only applicable to water
8 quality issues?

9 Does corrosion control have any
10 implications for water safety?

11 A. Yes, it will.

12 Q. Okay. So then, it would be
13 correct to say that you would disagree that it
14 applies only to water quality?

15 A. Yes.

16 Q. Okay.

17 A. Yes.

18 Q. I believe earlier you looked at
19 the final recommendations or the conclusions and
20 next steps on page 10, the top there. You can
21 see where it says, "Contract with your engineer
22 and initiate discussions with the state on the
23 addition of a corrosion control chemical."

24 A. Yes.

1 Q. Do you see anything in that
2 paragraph that would implicate water safety
3 concerns?

4 A. I do not.

5 Q. Now, when was the first time
6 that -- when were you first directed to add
7 that -- to prepare to add corrosion control to
8 the city's water supply or to the water
9 treatment process?

10 A. We were first, I'll say, directed
11 sometime I think August of 2015.

12 Q. And who were you directed by?

13 A. That would be the MDEQ.

14 Q. Okay. And do you know, was
15 corrosion control implemented by the city of
16 Flint after that?

17 A. Yes.

18 Q. When was it implemented?

19 A. I think mid to late December of
20 2015.

21 Q. So your recollection is that the
22 city received a directive from the MDEQ in
23 August of 2015 to implement corrosion control?

24 A. Yes.

1 Q. And was that going to require the
2 city to purchase equipment?

3 A. Yes.

4 Q. Would that require the city to
5 purchase chemicals?

6 A. Yes.

7 Q. And so -- and this was all
8 completed by December of 2015?

9 A. Correct, yes.

10 Q. Okay. In your -- how long were
11 you with the city of Flint?

12 A. Roughly 15 years.

13 Q. Okay. In that time period, how
14 would you rate the celerity of the city's
15 implementation of corrosion control?

16 A. Yeah, to implement a new treatment
17 process within a matter of months, it's really
18 unheard of in government work. It usually --
19 usually it's always at least a year for anything
20 regardless of what you're doing.

21 Q. Okay. And I guess just -- you
22 left -- when did you leave the city of Flint?
23 When did you leave the employ of the city of
24 Flint?

1 A. Sometime in April of 2016.

2 Q. Okay. And earlier you testified
3 that you thought it was Howard Croft who placed
4 you on administrative leave.

5 Do you remember that?

6 A. I don't remember saying that. If
7 I did, I probably did. I wasn't sure who put me
8 on administrative leave, to be honest with you.
9 I received a letter in the mail.

10 Q. Okay. If I were to represent to
11 you that Howard Croft had resigned from the city
12 in 2015, does that comport with your memory?

13 A. Yes.

14 Q. Would you then conclude that you
15 were probably mistaken if you named him as the
16 person who placed you on administrative leave?

17 A. Yeah, if I did name him, yeah, I
18 would have been mistaken then, yes.

19 Q. Okay. So the -- you're sure that
20 you left the city in May of 20-- --

21 A. April of 2016, yes.

22 Q. April of 2016, but -- and you're
23 not sure who at the city it was that placed you
24 on administrative leave.

1 A. No. Correct.

2 MR. KIM: Okay. I'm done. If we
3 can go off the record, and I'll reserve
4 the balance of my time for redirect.

5 THE VIDEOGRAPHER: We are going
6 off the record at 4:10 p.m.

7 (Recess taken.)

8 THE VIDEOGRAPHER: We are back on
9 the record at 4:13 p.m.

10 - - -

11 EXAMINATION

12 BY MS. SMITH:

13 Q. Good afternoon, Mr. Glasgow. My
14 name is Susan Smith. I represent McLaren in
15 this matter, and I have some questions for you
16 today.

17 I, like Mr. Kim, will be jumping
18 around. Many of the exceptional attorneys that
19 preceded me have covered many of the issues that
20 I felt we needed to dive into. So I may jump
21 around a bit.

22 If you don't follow one of my
23 questions, please let me know and I'll try to
24 make sure to rephrase it so you understand.

1 A. Okay.

2 Q. But if you do answer my question,
3 I'll presume -- and everyone reading the
4 transcript of this deposition will presume that
5 you understood it, fair?

6 A. Fair.

7 Q. Okay.

8 You've just explained to us, with
9 respect to Mr. Kim's questions, the monitoring
10 schedule that was established by MDEQ.

11 Do you recall that testimony?

12 A. Yes.

13 Q. And the -- what are the parameters
14 of that monitoring schedule for the Flint water
15 treatment plant?

16 A. Let me think here.

17 Q. Does it include chemicals?

18 A. Yes, it does include chemicals.

19 Q. And does it include
20 microbiological material?

21 A. Yes.

22 Q. And for the ease of reference
23 today and tomorrow when we're speaking, can we
24 just say "microbio"?

1 A. Yes, that's fine.

2 Q. Wonderful. Thank you.

3 And so the monitoring schedule
4 includes monitoring levels of chemicals and
5 microbio in the drinking water, correct?

6 A. That is correct.

7 Q. And where -- now, focusing on the
8 regulatory monitoring testing, where are those
9 samples collected?

10 A. A combination. Most were
11 collected right at the treatment plant. Some
12 are collected out in the distribution system.

13 Q. Okay. And why does the -- if you
14 know, what is your understanding as to why the
15 regulatory monitoring testing is conducted --
16 let's start at the plant. Do you know the
17 reason for that?

18 A. Well, I guess some of the -- well,
19 I probably can explain this how I look at it.

20 Q. Let me suggest that the testing of
21 the moni- -- plant is to evaluate the efficacy
22 of the treatment process.

23 Does that sound about right?

24 A. I could say that, yeah.

1 Q. That's to ensure that the
2 treatment process did what it was supposed to
3 do; is that a fair statement?

4 A. Yes, that's a fair statement.

5 MR. KIM: Objection as to form.

6 Q. And if you know, why does the
7 regulatory monitoring schedule include sampling
8 in the distribution system?

9 A. In a sense --

10 MR. MARKER: If you know.

11 A. Yeah. I guess I would say in some
12 aspect to look at the effects that the
13 distribution system has on the water.

14 Q. And that's because the water
15 quality and chemistry changes as it travels
16 through the distribution system pipes, correct?

17 A. Yes. It has that ability to
18 change, yep.

19 Q. And when we refer to distribution
20 system pipes today and tomorrow, that's the
21 system of piping that connects the outlet at the
22 Flint water treatment plant to the service lines
23 that then deliver water into people's homes and
24 into businesses that receive Flint treated

1 water, correct?

2 A. Correct.

3 Q. And that system -- the

4 distribution system piping includes the large

5 water mains, correct?

6 A. Correct.

7 Q. And a network of smaller water

8 mains on collateral lines, correct?

9 A. Correct.

10 Q. Okay. And your responsibility as

11 the Flint water treatment supervisor was the

12 quality of the water at the plant, correct?

13 A. Correct.

14 Q. And Mr. Bincsik and others had

15 responsibilities with respect to the

16 distribution system, correct?

17 A. Correct.

18 Q. And your colleagues that had

19 responsibility for the distribution system did

20 things like check pipes and investigate water

21 main breaks; is that right?

22 A. Correct, yes.

23 Q. Okay.

24 And the -- and let me ask you,

1 where at the plant were these samples collected
2 for the regulatory monitoring testing?

3 A. Most of them were -- it's dictated
4 in our monitoring schedule that they're taken
5 from the plant tap. So after we treat the
6 water, it's distributed through our plant
7 through all the faucets and everything, so we
8 had a specific faucet in our laboratory that was
9 everything leaving our filter gallery after a
10 complete treatment.

11 Q. Okay. And where were the samples
12 collected to assess the water in the
13 distribution system?

14 A. Yeah. That was -- there was a
15 number of different locations. That was set up
16 under the city of Flint's distribution
17 monitoring plan. So the city had previously
18 selected, I want to say, 10 to 12 sites
19 throughout the city that were where samples
20 would be collected.

21 Q. So you referred to a distribution
22 monitoring plan.

23 A. Yes.

24 Q. Who set up that plan?

1 A. I'm trying to think. That was
2 already instituted when I started working with
3 the water plant. So it would have been someone
4 with the city would have originally, I guess,
5 proposed a plan, and we would have sent it to --
6 the city should have sent it to the MDEQ for
7 approval and MDEQ sent it back saying, "Okay.
8 This looks like a good fit for your monitoring."

9 Q. Okay.

10 And we heard testimony about the
11 distribution sanitary survey. Would that have
12 included assessment of the distribution
13 monitoring plan, if you know?

14 A. I don't know offhand.

15 Q. Okay. Now, the samples
16 collected -- the 10 to 12 sites in the city, do
17 you know the -- were those taken at taps in
18 people's homes like you described with the Lead
19 and Copper Rule?

20 A. They were collected from actually
21 businesses, and it was either a -- yeah, kitchen
22 sink or a bathroom sink in a business.

23 Q. Okay. And do you know who -- who
24 selected those sites?

1 A. Like I said, I don't know
2 originally. When I first started working at the
3 water plant, that plan was already in place. So
4 I can't -- I can't elaborate on who, who
5 originally set that up.

6 Q. Okay. And do you know if the --
7 well, strike that.

8 The -- and, of course, when water
9 sample -- these were all water samples, correct?

10 A. Correct, yes.

11 Q. Both at the lab and in the
12 distribution system?

13 A. Correct.

14 Q. And I take it that those water
15 samples were analyzed in a laboratory; is that
16 right?

17 A. That is correct.

18 Q. So, if you could tell me, what
19 laboratories were involved in analyzing the
20 samples collected as part of the routine
21 monitoring -- regulatory monitoring sampling?

22 A. Okay. With all of our routine
23 monitoring, distribution or the plant, most of
24 the parameters, we were -- we could test for

1 right in the lab at the city of Flint water
2 plant. Certain parameters we weren't certified
3 for, so your lead and copper, your disinfection
4 byproducts, those would be sent out to a
5 contract lab, but the coliform bacteria testing
6 and the heterotrophic plate counts, the city of
7 Flint water plant lab was certified to do that
8 testing.

9 Q. Okay. And the -- I understand you
10 brought on new staff at around April 2014 before
11 the switch was flipped, if you will. Were some
12 of the new staff persons laboratory personnel?

13 A. One gentleman was laboratory
14 personnel after I had another employee leave.

15 Q. And, now, you were the laboratory
16 supervisor, correct?

17 A. Correct, yes.

18 Q. Could you describe for us very
19 briefly what the daily process was for handling
20 the routine monitoring sampling.

21 A. Well, the routine sampling
22 throughout the plant -- usually the laboratory
23 staff, I should start with that, was myself and
24 usually two other city employees.

1 Q. And one of them was one of the new
2 people?

3 A. Yeah, and one was one of the newer
4 people.

5 Q. Okay.

6 A. But I stole -- I shouldn't say I
7 stole. One of the newer people that I placed in
8 the lab had come from the Delta College water
9 and wastewater program. So I didn't -- I didn't
10 put nobody fresh off the street in the lab.

11 Daily monitoring there, I'd have
12 to look at our MORs, but it was mainly a group
13 of different parameters, hardness, calcium, pH,
14 chlorine, turbidities. I'm trying to think if
15 I'm missing anything. Of course, our coliform
16 bacteria, and also an HPC, heterotrophic plate
17 count, we were required to get daily.

18 And it depended on my staff. Like
19 I said, I only had two other staff. It was
20 either one or the other. One would be doing the
21 inside, the plant stuff, and the other would get
22 out in the distribution and collect samples to
23 bring them back for testing as well.

24 Q. Okay. Now, there was testimony

1 previously that the sampling at the plant was
2 daily?

3 A. Yes.

4 Q. And the sampling in the
5 distribution system was three times a week?

6 A. Roughly three times a week. We
7 were required to collect 100 samples due to our
8 population out in the distribution system. So
9 with, you know, 10 to 12 sites usually three
10 days a week would do it.

11 Q. And was that 100 samples daily,
12 weekly, monthly?

13 A. Monthly, 100 samples monthly.

14 Q. 100 monthly.

15 A. I'm sorry.

16 Q. Okay. And was there any chain of
17 custody maintained for the samples collected in
18 the distribution system?

19 MR. MARKER: Object to the form.

20 Q. Are you familiar with the concept
21 of a chain of custody, sir?

22 A. Yes, I am.

23 Q. And you understand that that's
24 documentation that tracks the handling of a

1 laboratory specimen?

2 A. Yes.

3 Q. And were chain of custody

4 documents maintained for any of the samples

5 collected from the distribution system?

6 A. Yes. Usually our individuals out
7 collecting the samples in the distribution
8 system had their data sheet, which was also the
9 chain of custody, and they would -- they never
10 left their possession. They would collect the
11 samples, bring them back to the lab. They would
12 also do the testing. So the chain of custody
13 was included in the daily sheet with all the
14 rest of the data.

15 Q. And who is the custodian of those
16 data sheets or chain of custody records?

17 A. It would be the city of Flint.

18 Q. Where were those data sheets filed
19 after the samples were collected and brought
20 back to the lab?

21 A. They would have been filed in the
22 laboratory there.

23 Q. Okay. And those are city of Flint
24 files?

1 A. Yes.

2 Q. And the -- okay. One hundred
3 weekly. You mentioned that there were some
4 external labs involved in connection -- for the
5 LCR and the DBP testing.

6 A. Yes.

7 Q. Did you use external labs for any
8 other purpose?

9 A. Not to my knowledge, no.

10 Q. And what was your process for
11 obtaining the services of a contract lab in
12 2014?

13 A. Yeah, in 2014, I'm trying to
14 think. Because prior to 2014, anything our lab
15 couldn't test for or wasn't certified to test
16 for, we always defaulted and used the MDEQ lab
17 in Lansing.

18 Q. Okay.

19 A. For pretty much everything we
20 needed, they could handle.

21 Q. Now, did MDEQ charge a fee for
22 running those tests?

23 A. Yes.

24 Q. And what was the fee?

1 A. Oh, goodness gracious.

2 Q. If you know.

3 MR. MARKER: If you don't know,
4 don't guess.

5 A. Yeah, I can't recall, to be honest
6 with you.

7 Q. So MDEQ analyzed the samples for
8 the LCR compliance and the disinfection
9 byproducts compliance, right?

10 A. Correct, yes.

11 Q. And did you use external labs,
12 contract labs, for any other purpose?

13 A. There may have been an instance
14 once or twice for a contract lab in regards to
15 TTHM sampling.

16 Q. Okay. And, now, the TTHM sampling
17 would be part of the Disinfection Byproducts
18 Rule compliance, right?

19 A. Correct, yes.

20 Q. And typically MDEQ's laboratory in
21 Lansing did that testing.

22 A. Correct, yes.

23 Q. And if you could explain for me
24 why you then sent samples out to a contract lab

1 for TTHM sampling.

2 A. I personally did not send samples
3 out. I believe it was instituted by either
4 Mr. Croft or Mr. Johnson during an issue we were
5 having with TTHMs when that first come to light.

6 Q. Do you know when this was that
7 Mr. Croft or Mr. Johnson engaged the services of
8 an external lab?

9 A. I can't say for sure. I know if
10 our issues of THMs really become apparent in the
11 fall of '15, I'm going to say it's late '15,
12 early '16. But if I had to put a date on it, I
13 couldn't tell you.

14 Q. Sir, let me represent to you that
15 the TTHM violation was issued in late 2014.

16 A. Okay. It could have possibly
17 been -- it could have possibly been early '15.
18 I can't recall the dates. As I said, I
19 didn't -- I wasn't the one that instituted it.

20 Q. Okay. So, to your understanding,
21 Mr. Croft or Mr. Johnson engaged an external lab
22 to do some testing for TTHMs?

23 A. Yes.

24 Q. How did you learn about them?

1 A. One of them told me they were
2 going to do it and the sample bottles just
3 showed up one day --

4 Q. Do you know --

5 A. -- from what I recall.

6 Q. Okay. Pardon me.

7 A. Oh, no, you're all right.

8 Q. And do you know who collected the
9 samples for that TTHM testing?

10 A. I couldn't tell you who collected
11 those samples either.

12 Q. Okay. And do you know what
13 laboratory was involved in running those tests?

14 A. I can't say for certain.
15 Possibility -- but I don't want to --
16 possibility of TestAmerica, but I -- I can't say
17 if that was for sure. I'm trying to remember a
18 logo on the paper but ...

19 Q. Okay. Were there external
20 contract labs that you routinely worked with in
21 your time with the Flint water treatment plant
22 other than MDEQ and TestAmerica?

23 A. Not at the water treatment plant,
24 no.

1 Q. Okay. How about anywhere else in
2 your work experience with the city of Flint?

3 Did you work with any other external labs?

4 A. When I was with the city of Flint
5 wastewater plant, they utilized external labs
6 for some testing.

7 Q. Okay. And the -- do you know of
8 any other occasion when Mr. Croft or Mr. Johnson
9 engaged a contract lab to analyze some samples
10 from the Flint water system?

11 A. No, I do not.

12 Q. Okay.

13 Focusing still on the regulatory
14 compliance sampling, the -- some amount of data
15 is generated as a result of the laboratory
16 analysis of these samples, both at the water
17 collected at the plant and in the distribution
18 system. Is that data then analyzed and
19 summarized in the MORs?

20 A. Yes.

21 Q. And when we speak of MORs today
22 and tomorrow, that's the monthly operating
23 reports, correct?

24 A. Correct, yes.

1 Q. And what are the MORs, from your
2 perspective as the lab supervisor for the Flint
3 water treatment plant?

4 A. Yeah, it's basically -- your
5 monthly operating report or MOR is basically a
6 compilation of all your data for the calendar
7 month of what has been tested and usually what
8 is required to be reported to the regulatory
9 agencies.

10 Q. So you are the person at the Flint
11 water treatment plant who compiles the data and
12 generates the MOR each month; is that correct --

13 A. That is correct.

14 Q. -- in your term as the laboratory
15 supervisor?

16 A. Yes, that is correct.

17 Q. And who would then receive those
18 MORs?

19 A. They would be mailed to Mr. Prysby
20 at the DEQ.

21 Q. And did you maintain copies of the
22 MORs in the city of Flint files?

23 A. Yes.

24 Q. And were those handwritten

1 documents or were they computerized?

2 A. It was computerized, pretty simple
3 Excel spreadsheets.

4 Q. And the -- what data did you
5 review to compile the MORs?

6 A. We would use -- I would compile
7 our daily, I guess, laboratory bench sheets from
8 inside the lab as well as the bench sheet/chain
9 of custody from the distribution sampling. So I
10 would have to transpose all that into a monthly
11 report.

12 Q. So you would -- would you review
13 those physical documents and create your Excel
14 spreadsheet?

15 A. Correct, yes.

16 Q. And let me ask you. We've heard
17 some testimony of the SCADA system. Was any of
18 the data generated from the daily sampling of
19 the water treatment plant generated through the
20 SCADA system?

21 A. No, not to my knowledge, no.

22 Q. Could you tell us what role the
23 SCADA system had at the Flint water treatment
24 plant in 2014?

1 A. In 2014. So around the time we
2 switched then. It was mainly -- most of the
3 information in the SCADA system was mainly --
4 had to do with plant processes. The SCADA
5 system would show levels of water in our storage
6 reservoirs, which we had one at the water plant,
7 two out in the system. Also show how much
8 storage was in the elevated water tower we had
9 at the water plant.

10 But as -- and that's about all I
11 can recall at the time. We were -- we did go
12 through a pretty extensive SCADA upgrade at that
13 time, or a little later, but I can't recall
14 anything else offhand.

15 Q. So you indicated that, to your
16 knowledge, the SCADA system was only involved in
17 monitoring the levels of water in the
18 reservoirs; is that correct?

19 A. Yep. That's a large portion of
20 it, yes, because we could externally -- or we
21 could turn on pumps and pump out our reservoirs
22 when need be. And one of my operator foremen
23 would have that power to keep balancing the
24 water throughout the town.

1 Q. Okay. Did the SCADA system serve
2 any other function other than monitoring the
3 water levels in the tanks?

4 A. I'm sure there was a couple other
5 functions. I can't tell you offhand exactly
6 what they were. I'm trying to picture that.

7 Q. Who would know the purpose -- the
8 other functions of the SCADA system?

9 A. Any one of the operator foremen
10 there that controlled the SCADA room.

11 Q. And do you know the names of any
12 of those individuals?

13 A. Think back to my time before I
14 left. There was a Scott Dungee. There was a
15 Don Echlin. I believe that's spelled e-c-h.
16 There was a -- I believe a Charles Yanta, and
17 then another gentleman, Matthew McFarland, but
18 he has since passed.

19 Q. Did you know Mr. McFarland?

20 A. I did, yes.

21 Q. And did you hear
22 Mr. McFarland's -- news reported about what
23 Mr. McFarland had said about his concerns about
24 the water at the --

1 A. I heard that --

2 Q. -- distributed from the water
3 treatment plant?

4 A. Yeah, I heard that --

5 MR. KIM: Objection to form and
6 foundation.

7 Q. You heard reports regarding
8 Mr. McFarland's concerns?

9 A. I heard little bits, yeah, bits
10 and pieces here and there.

11 Q. What did you hear?

12 A. Just that he had some concerns.
13 Some of the reports I heard from Mr. McFarland
14 wasn't coming from him. It was coming from a
15 relative of his, and I -- so specifics, it
16 just -- I can't remember any specifics. I just
17 knew there was bits and pieces of he was a
18 little worried, possible -- you know, public
19 health issues, but I knew Mr. McFarland pretty
20 well.

21 Q. Did he share these concerns with
22 you?

23 A. No. I'm going to say no, he did
24 not. Not like the concerns I heard with public

1 health. He had the same issues as I did with
2 running the plant with staff. He was one of my
3 senior operator foremen. I trusted him to kind
4 of hold that end of the process together. And
5 we didn't have too many in-depth conversations
6 to where I felt he was that worried.

7 Q. But he did share your concerns
8 about starting operations at the plant in April
9 of 2014?

10 A. Oh, yes, yes.

11 Q. And he shared in your concern that
12 the plant was not ready to operate on a
13 full-time basis to produce drinking water for
14 human consumption?

15 MR. MARKER: Objection to the
16 form.

17 A. Yeah. He -- I will just say my
18 e-mail that I had sent that's been in testimony
19 saying I wasn't ready with this, we need more
20 time, he was happy I sent that.

21 Q. Okay. And he shared his views
22 about that e-mail and your sentiments conveyed
23 in that e-mail to Mr. Rosenthal. He shared
24 those -- his feelings about that with you

1 personally?

2 A. Yes.

3 Q. Okay.

4 Now, you said you'd heard reports
5 about what a relative of Mr. McFarland has said.
6 Do you have any reason to dispute the relative's
7 characterizations of Mr. McFarland's concerns?

8 MR. MARKER: I'll object to the
9 form.

10 A. I don't know how I would answer
11 that. I would just reiterate saying me and
12 Mr. McFarland were tight. If he had concerns, I
13 think I would have heard of them first -- heard
14 from him first.

15 MR. CAMPBELL: I'm sorry, did you
16 say that you and McFarland were tight?

17 THE WITNESS: Yeah, we were pretty
18 close.

19 MR. CAMPBELL: Thank you.

20 THE WITNESS: Yeah.

21 BY MS. SMITH:

22 Q. And did you know him to be a
23 competent employee of the Flint water treatment
24 plant?

1 A. Absolutely, yes.

2 Q. And I take it you knew him both
3 personally and professionally?

4 A. Yes.

5 Q. And did you know him to be a man
6 of good character?

7 A. Yes.

8 Q. And a reliable reporter of
9 information?

10 A. Yes. I trusted him with
11 everything, yeah.

12 Q. We were talking about the SCADA
13 room, and I -- there has been some testimony
14 that the SCADA had some role with respect to
15 monitoring the chlorine residual.

16 A. Well, we did have inline chlorine
17 monitors, but those weren't numbers that were
18 reported to the state. We always physically
19 took the samples. To get certified to use your
20 inline monitors took a lot of maintenance with
21 them and care, which we didn't have the time to
22 do. And since we had lab staff and operators,
23 it was a lot easier just to grab samples to
24 verify, so ...

1 Q. Okay. And where were those
2 samples taken, the inline monitor, chlorine
3 monitor?

4 A. Seems like we had them in each of
5 the reservoirs that stored water, and we had one
6 just after final treatment after adding chlorine
7 after filtration before water was distributed
8 out to the city.

9 Q. And why did you check the chlorine
10 residual in the reservoirs if it wasn't
11 something -- a data point reported to the state?

12 A. Well, I will say our two
13 reservoirs that were out in the city, we
14 considered them part of the distribution system.
15 So those numbers were reported from those
16 reservoirs.

17 Q. Okay.

18 A. And we also had the capability to
19 add more chlorine at the reservoirs if
20 necessary.

21 Q. Okay. And so why was it important
22 to monitor the chlorine levels in the stored
23 water?

24 A. Well, the city of Flint, we had

1 more storage than necessary, I will say. We had
2 a 20-million-gallon reservoir and another
3 12-million-gallon reservoir out in the city.
4 So, you know, if my operators weren't careful,
5 it might take four or five days to turn over
6 that water. So chlorine residual was a good eye
7 on it. We could tell if we needed to turn it
8 over a little faster.

9 Q. And why is maintaining chlorine
10 residual in treated drinking water important?

11 A. Important for a number of reasons,
12 mainly microbiological, but also, when we --
13 when I look at it from a treatment plant
14 operator standpoint, I mean, it's kind of
15 dictated in the Safe Drinking Water Act that we
16 keep at least a small residual even at the far
17 ends of the system. So chlorine numbers are
18 always good to look at.

19 Q. And do you know, is there a number
20 you can assign to that small -- the target range
21 from the Safe Drinking Water Act?

22 A. Yes. I'll say it's 0.2 milligrams
23 per liter of total chlorine residual.

24 Q. And would that translate into a

1 parts per million number for those of us that
2 think in those terms?

3 A. Oh, yeah. Milligrams per liter
4 and parts per million are interchangeable so ...

5 Q. Okay. So -- all right.

6 A. Yeah. So .2 parts per million,
7 you could say.

8 Q. .2, okay. The -- let me just ask
9 you a quick follow-up question about the
10 monitoring schedule. I understand that was
11 something that was set for you by MDEQ, right?

12 A. Correct, yes.

13 Q. And you were still employed as the
14 laboratory supervisor when the system
15 reconnected to Detroit in October of 2015; is
16 that right?

17 A. That is correct, yes.

18 Q. And did you have a change in the
19 monitoring schedule when that switch was made?

20 A. Wow. I'm trying to think back. I
21 imagine we did. I can't picture receiving the
22 monitoring schedule.

23 Q. Okay.

24 A. But it seems like we shifted back

1 to what we did prior to the switch to the Flint
2 River.

3 Q. Okay. Do you have any
4 recollection, sir, that the monitoring schedule
5 put in place at or around the time of the
6 October 2015 reconnection included requirements
7 above the regulatory minimums?

8 MR. MARKER: Objection to form,
9 foundation.

10 A. I believe it did.

11 Q. So that is certainly something you
12 could have done?

13 MR. MARKER: Objection to form,
14 foundation.

15 Q. All right. We'll revisit that
16 tomorrow.

17 The -- all right. Just a couple
18 basic questions about water sampling. Why do
19 you collect samples at the plant on a daily
20 basis?

21 A. That would be to, I guess, be able
22 to show that the treatment process is doing its
23 job to show that we're going to meet the
24 drinking water standards.

1 Q. Well, you're sampling at the
2 distribution side on a weekly basis or a couple
3 times a week. Why don't you just do the
4 sampling at the plant three times a week?

5 A. I don't have an answer to that.
6 I'll just say that's what was stipulated with my
7 monitoring schedule.

8 Q. Now, you've tested a lot of water
9 over your career, fair statement?

10 A. Fair to say, yes.

11 Q. And does water quality and
12 chemistry change rapidly?

13 A. It can, yes.

14 Q. It can. And so when you sample
15 water on a daily basis, it might show certain
16 parameters on one day and completely different
17 parameters the next day. Has that been your
18 experience?

19 A. Yep, that's fair to say.

20 Q. And when you analyze samples
21 collected from the distribution system, you've
22 seen the same issue, that samples drawn on
23 Monday could be completely different from what's
24 drawn on Wednesday, fair statement?

1 A. That's a fair statement.

2 Q. And that's because water quality
3 and chemistry is highly variable. Is that a
4 fair statement?

5 A. Yes, that's a fair statement.

6 Q. And would you -- and why is it, if
7 you know, that there are seven to ten sampling
8 locations in the distribution system to monitor
9 water quality?

10 A. Well --

11 MR. MARKER: Form and foundation.

12 A. In my eyes, it's -- you want a
13 good representative sample of the entire city,
14 so you kind of want to spread everything out.

15 Q. And your -- strike that.

16 Let me now jump to non-regulatory
17 sampling. We've talked about the regulatory
18 sampling. The -- you talked about Mr. Croft and
19 Mr. Johnson telling you that they were having an
20 external lab do some TTHM samples. Were those
21 samples collected as part of the regulatory
22 scheme?

23 A. No, not to my knowledge.

24 Q. And do you know of any other --

1 I'm going to refer to this as non-regulatory
2 sampling, sampling that's not part of the
3 monitoring schedule set by MDEQ.

4 Are you aware of any other
5 non-regulatory sampling conducted on water
6 treated at the city -- water produced at the
7 water treatment plant in 2014 or 2015?

8 A. The only other testing that I can
9 think would have been when the city installed a
10 THM monitor. It was an inline monitor. It
11 would take about an hour to get a test result.
12 And that's the only one I could think of.

13 While I was there, if any testing
14 was done, regulatory or not, that's another
15 reason I preferred to use the state MDEQ lab
16 because then the DEQ, they would have -- my
17 district engineer, Mr. Prysby or Mr. Busch, they
18 would have the results of anything I sent in
19 there.

20 Q. So if testing was done at your
21 laboratory in 2014 or 2015, you would know about
22 it.

23 A. Yes.

24 Q. Is that fair?

1 A. Yep, that's a fair statement.

2 Q. And I'm going to tell you that
3 Mr. Bincsik has testified to some testing out in
4 the distribution system with a -- now I'm going
5 to mess this up -- it's either hatch or hack
6 meter checking for chlorine residual levels in
7 the distribution system. It was outside of the
8 regulatory program.

9 Do you know anything about that?

10 A. No, not offhand, but it doesn't --
11 it's refreshing to hear that they had those
12 meters to be able to monitor things. Now, I'm
13 not an expert on the distribution side, but I
14 know if Mr. Bincsik had a water main break or
15 they had to cut in a section of pipe, they'd
16 have to chlorinate it after the fact, and so I
17 could see them having meters to do that.

18 And if they did do -- you know,
19 sometimes they would bring us the bacteria
20 samples after they put a new water main on
21 service. They'd bring that to my lab. But,
22 yeah, for normal chlorine testing I wouldn't
23 have any idea what Mr. Bincsik and his crew was
24 up to.

1 Q. Okay. And how about citizen
2 sampling. You went into residents' homes,
3 Ms. Walters' home.

4 A. Yes.

5 Q. Did you go to any other resident's
6 home to do sampling?

7 A. Over my tenure with the city, I
8 was in a significant number of homes.

9 Q. And did you ever check chlorine
10 residuals in citizens homes?

11 A. Yes.

12 Q. And what were your findings when
13 you did that sampling?

14 A. It would vary. Sometimes they
15 were fine. Sometimes they were a little low.

16 Q. When you say "a little low," do
17 you mean below the 0.2 PPM target?

18 A. I'm sorry. When I say "a little
19 low," the way I used to operate and the way I
20 operate the system I work at now is .5 to me is
21 getting on the low end. If it starts getting
22 below .5 milligrams per liter or parts per
23 million total chlorine residual that makes me
24 start thinking that I want to bump it up a

1 little bit.

2 Q. All right. The -- so in your
3 experience and, again, focusing on 2014 and
4 2015, did you ever sample for chlorine residual
5 in citizens' homes?

6 A. Yes.

7 Q. And did you find on occasion
8 results that were below the 0.2 target range
9 that was applicable for the Flint system during
10 that time?

11 A. I will say yes.

12 Q. And if you can, tell me
13 approximately how many times you did that type
14 of sampling.

15 A. I don't feel I can give you -- I'm
16 not confident in an approximation. I will say
17 after the switch, mostly any water complaint we
18 would get, if I could find the time, myself or
19 my staff would go visit that home. We had a
20 nice little complaint form we'd fill out with
21 information, name, address, and if we took a
22 chlorine sample, the results would be on there.

23 Q. Okay.

24 A. As well as we'd also collect a

1 coliform bacteria sample.

2 Q. And did you generate papers when
3 you did that type of sampling?

4 A. Yes.

5 Q. And were those papers stored in
6 the records of the city of Flint?

7 A. Yes.

8 Q. Okay. And sir, you were the
9 laboratory supervisor. Why were you going out
10 into people's homes?

11 A. Well, I only had myself and two
12 other lab staff. We also had to work weekends.
13 So most of the time -- well, gosh. How do I say
14 this too. And at one time it was myself and I
15 had two female employees, and to me it wasn't
16 safe to send them out into the city and into
17 city's homes. So maybe it's a little
18 misogynistic, but I -- if I was going to put
19 somebody in danger, it was going to be myself.

20 Q. Understood.

21 Now, on those occasions when you
22 did go out into the field and grab samples from
23 people's homes, or even the distribution system,
24 you saw -- did you see results that were

1 different from what you saw at the laboratory?

2 MR. MARKER: Object to form and
3 foundation.

4 A. Yeah, I guess I'm not quite
5 understanding "different from the laboratory."

6 Q. If you --

7 A. So I'm in the homes --

8 Q. You testified that the testing you
9 did at the laboratory showed that you were
10 hitting the targets set at the laboratory,
11 correct?

12 A. I don't know which targets. Like
13 the targets at my treatment plant that I'm
14 hitting?

15 Q. Right. Your testimony, as I
16 understand it, was that the daily testing you
17 did at the plant showed that you were meeting
18 the requirements of the Safe Drinking Water Act.

19 A. Correct, yes.

20 Q. And my question is, when you
21 collected samples out in the system, whether in
22 people's homes or at the distribution -- at the
23 sampling sites in the distribution system, those
24 results were different from what you saw at the

1 laboratory, correct?

2 MR. MARKER: I'll object to form
3 and foundation.

4 A. I will say yes, because to me
5 it's -- yeah, it's two different types of water.
6 My water at the plant is right there.

7 Q. Explain to me --

8 A. The other has traveled through the
9 distribution system.

10 Q. Why do you say that, that it's --
11 the water is different or the sampling is
12 different?

13 A. I'm just saying the results are
14 going to be different. If I have a chlorine
15 residual of 2 parts per million leaving my
16 treatment plant, I know if I go to the far end
17 of the system, I'm not going to see two parts
18 per million of chlorine at the far end of the
19 system.

20 Q. And why is that, sir?

21 A. It's a number of factors.
22 Chlorine wants to be a gas. It don't want to
23 stay in water. Warm temperatures will make
24 chlorine come out of the water. Chlorine can

1 react with other substances inside the water.

2 Q. Did you ever learn that there were
3 areas of the city of Flint water distribution
4 system where there was levels of chlorine
5 residual below the regulatory target of 0.2?

6 A. Yes.

7 Q. And tell us, what do you know
8 about that?

9 A. I just remember one -- one of our
10 specific locations was always on the low end
11 of -- which means to me less than .5, but there
12 was times when the chlorine residual was, you
13 know, .2 or .1.

14 Q. And where were those areas?

15 A. The only one sticks out in my
16 head, and it was on Martin Luther King Avenue.
17 I believe it was our site number 11, and that
18 was kind of a historic lower place. That was
19 kind of one we always watched even prior to the
20 switch.

21 Q. And do you know if anybody from
22 the city of Flint notified the residents and
23 businesses receiving the water in that area of
24 that plant that the chlorine levels -- chlorine

1 residual tended to be below the target range?

2 A. I could not tell you that. I do
3 not know.

4 Q. Let me ask you a little bit about
5 Legionella testing. Now, do you consider
6 Legionella a regulated contaminant under the
7 Safe Drinking Water Act?

8 MR. MARKER: Objection; form,
9 foundation.

10 A. I do not. I was not aware of any.
11 I'll put it this way: In my years of water
12 testing, that has never been a stipulated
13 organism to test for.

14 Q. What is your understanding as to
15 how Legionella is treated under the -- now, you
16 testified previously that you're familiar with
17 the regulatory requirements of the Safe Drinking
18 Water Act; is that right?

19 MR. MARKER: Objection to form.

20 A. That is right.

21 Q. And you're familiar with both the
22 state Safe Drinking Water Act and the federal
23 Safe Drinking Water Act, correct?

24 A. Correct.

1 Q. And please tell us, to your
2 knowledge, how is Legionella addressed in the
3 Safe Drinking Water Act?

4 A. In my understanding, from what I
5 recall, it is -- like I said, it's not
6 specifically addressed but it's addressed in the
7 fact of chlorination in your distribution system
8 and chlorine levels.

9 Q. Do you agree with me that it is
10 addressed by the Safe Drinking Water Act in an
11 indirect manner?

12 MR. MARKER: Objection to form.

13 A. I will say prior to 2014 I didn't
14 believe it was regulated in an indirect manner,
15 no.

16 Q. Has your understanding changed?

17 A. Since 2014, my understanding has
18 changed on a number of issues.

19 Q. And how has your understanding --
20 has your understanding regarding Legionella
21 under the Safe Drinking Water Act changed since
22 2014?

23 A. Well, since 2014 -- prior to 2014,
24 you never heard much about Legionella in

1 drinking water, almost like it wasn't really a
2 concern. You know, any time you heard of that,
3 you heard of, you know, somebody -- cooling
4 towers or people all in the same building would
5 get infected, in that aspect.

6 Q. And so you --

7 A. After the -- oh, go ahead.

8 Q. Go ahead, sorry.

9 A. I'm trying to stimulate my memory
10 here for you. Now, after the fact, in
11 hindsight, you know, you look more at
12 chlorination levels out in the system. With, I
13 guess, more information that I was -- or
14 knowledge, I should say, I was privy to or over
15 a year or so with gentleman from the EPA and
16 also other members of the MDEQ, you know, you
17 learn a few more other things in regards to
18 Legionella.

19 Q. And let me ask you, sir, you
20 recall when the EPA came in in January of 2016
21 and issued an emergency order, right?

22 A. Uh-huh.

23 Q. And you were still employed by the
24 city during the period of January 2016 to

1 approximately April of 2016; is that your
2 testimony?

3 A. That is correct, yes.

4 Q. And were you in contact with
5 people from the EPA during that January to April
6 time frame?

7 A. Yes.

8 Q. And did you discuss with them the
9 requirements of the emergency order that the EPA
10 had issued?

11 A. Yes, I vaguely ...

12 Q. And one of those requirements
13 related to maintaining a chlorine residual in
14 the distribution system; isn't that right?

15 A. That is correct.

16 Q. And do you recall speaking to a
17 gentleman named Robert Kaplan regarding that
18 requirement?

19 A. Yes.

20 Q. What do you recall of your
21 communications with Mr. Kaplan?

22 A. I recall meeting him on a couple
23 different occasions. But to pull up specifics,
24 I don't think I can come up with any here.

1 Q. Did Mr. Kaplan impress upon you
2 the importance of maintaining a chlorine
3 residual in order to minimize the risk of
4 Legionella growth?

5 MR. MARKER: Object to the form.

6 A. I don't recall that -- that exact
7 statement. Very well may have been, but I'm
8 sorry, I can't pull it from my memory.

9 Q. Did Mr. Kaplan ever express
10 concern to you regarding the low level of
11 chlorine residual in the Flint distribution
12 system during that January to April time frame?

13 A. I don't recall an incident with
14 Mr. Kaplan because -- and I may be confused
15 here, but Mr. Kaplan, I think, come in, and he
16 was a little higher up in the EPA. I remember a
17 couple other EPA employees, I'll say, that are
18 more the field guys that worked in the
19 laboratory. So I can recall discussions with
20 some of them in regards to keeping the chlorine
21 up. I don't -- I cannot remember it ever being
22 associated with Legionella like that, though, I
23 hate to say.

24 Q. And do you recall that both the

1 EPA and the MDEQ increased the number of
2 monitoring locations in the distribution when
3 they came in in January of 2016?

4 A. Yes, I do recall that.

5 Q. And what do you know about that?

6 A. It's another one of the field
7 gentlemen. I apologize. I don't remember his
8 name. I'm not good with names at all, let alone
9 four years later.

10 But I remember they come in and
11 looked at our monthly operation reports, seeing
12 how many sites we had. And they suggested, you
13 know, the shape of our system and the issues we
14 were having, we should increase the number of
15 sites.

16 I also know that they installed a
17 couple -- I don't know if it was hydrant
18 flushers, a contraption you could put on a
19 hydrant that would flush itself every so often
20 to kind of get rid of stagnant water to help
21 keep chlorine residuals up. I do recall that.

22 Q. Just so I'm clear, when you said
23 that your understanding about Legionella had
24 changed since 2014, in hindsight, you now

1 understand you look more at chlorination levels.

2 Did I hear you correctly?

3 MR. DAWSON: Objection; no

4 foundation.

5 Go ahead, sir.

6 A. Yeah, I believe I said that, yeah.

7 And, I mean, we looked at chlorine residuals
8 anyway. I mean, that was an important aspect of
9 our monitoring and our regulations. But I never
10 associated it with Legionella before, I'll say.

11 Q. And your understanding about that
12 relationship changed after 2014; is that what
13 you're saying?

14 A. Yeah. I'm saying after more time
15 with experts in the field, yeah, it increased
16 the knowledge, yes.

17 Q. And in your reference to looking
18 at chlorination levels, that would have been in
19 relation to the distribution system, correct?

20 A. Correct, yes.

21 Q. And just a couple quick questions
22 about this HPC test. Now, I understand that
23 Legionella -- you didn't -- you would have known
24 of testing done on the city of Flint water

1 because you had a lab supervisor, right?

2 A. Correct.

3 Q. And to your knowledge, there was
4 never -- and because of your knowledge with
5 water testing and laboratory analysis of water
6 samples, you know that there is a test
7 specifically for Legionella bacteria, correct?

8 A. At the time, I was not aware --

9 Q. Okay.

10 A. -- of anything specific.

11 Q. And -- but the HPC test was part
12 of the routine Bac-T testing, correct?

13 A. Correct, yes.

14 Q. And that is the -- that tests the
15 family level of bacteria --

16 A. Correct.

17 Q. -- as you explained to Mr. Kim.

18 Did you at some point in time --
19 now, I believe you told Mr. Kim that if
20 Legionella was there, it would show up on the
21 HPC test?

22 A. Yes, I -- yeah, we assumed if it's
23 in that family of bacteria, and we're doing HPC
24 tests and them come clear, we should be in the

1 clear, so to speak.

2 Q. And what do you mean by "clear"
3 with the HPC test?

4 A. If it was -- if you basically
5 got -- the lowest number was less than 2 --

6 Q. So if it was less than 2 --

7 A. -- for that testing. For the way
8 the calculations went with their prepackaged
9 plates, it was a clear plate, no fluorescence,
10 so no bacteria was shown. But due to the
11 statistics of the test, it would be reported at
12 less than 2.

13 Q. So if the result was clear, you
14 presumed there was no -- none of this HPC family
15 of bacteria, including Legionella?

16 A. Correct.

17 Q. And would the converse be true,
18 that if the HPC was above 2, that this HPC
19 family, including Legionella, was present?

20 MR. MARKER: Objection to form.

21 A. If it was above 2, there is a
22 possibility it could be Legionella.

23 Q. And did you at some point in time
24 learn that there is such a thing as a direct

1 test for Legionella bacteria that can be run on
2 water samples?

3 A. Yes.

4 Q. And how did you learn about that?

5 A. To be honest with you, I just read
6 about that about two months ago, and it was
7 based off the -- I was looking to order supplies
8 at my new place I work for, and I seen a
9 specific test called Legiolert, you know, and it
10 was similar to the Colilert we used for coliform
11 bacteria. So that's when I just found out about
12 that specific test. That's a little more
13 functional and quick to do.

14 Q. Let me ask you: Do you have any
15 recollection of any communication with any
16 person at EMSL lab back in 2015?

17 A. I do not recall. For some reason,
18 it sounds a little familiar, but I can't pull
19 anything up.

20 MS. SMITH: If we can go off the
21 record for just a moment. I need to
22 pick up an exhibit from my pile across
23 the room.

24 THE VIDEOGRAPHER: We are going

1 off the record at approximately

2 5:04 p.m.

3 (Pause in proceedings.)

4 THE VIDEOGRAPHER: We are back on

5 the record at 5:05 p.m.

6 - - -

7 (Glasgow Deposition Exhibit 33 marked.)

8 - - -

9 BY MS. SMITH:

10 Q. For the record, this was
11 previously marked as Johnson Exhibit 147. And
12 I'll represent that it is an e-mail from a
13 dianemiskowski@emsl.com to
14 mglasgow@cityofflint.com, March 20th of 2015 at
15 11:42 a.m. The subject line is "Legionella
16 Quote," and the attachment is a city of Flint
17 water plant PDF, Bates range COF_FED_0103438,
18 and the price quote goes to -- ends with
19 COF_103443.

20 Have you had a chance to review
21 the document?

22 A. Yeah, I was looking at it here,
23 yeah.

24 Q. Now, I understand, sir, it's been

1 many years since some of these events took
2 place. Does reviewing this document refresh
3 your recollection of any communications with the
4 folks at EMSL lab about Legionella testing?

5 A. Yeah, I'm assuming I had just sent
6 out for a quote.

7 Q. Now, is that the e-mail address
8 that you had assigned to you when you were
9 employed at the city of Flint water treatment
10 plant?

11 A. Yes, it was, yep.

12 Q. And do you recall reaching out to
13 EMSL lab about a Legionella quote?

14 A. I don't recall it, but I obviously
15 did here via this e-mail.

16 Q. Okay. So you --

17 A. March 20, 2015, hmm.

18 Q. If I were to ask you why you've
19 reached out to EMSL, would you -- let me just
20 ask you that question. Do you know why you
21 reached out to EMSL?

22 A. Oh, well, looking at the date of
23 this, figuring it was March 20 of 2015, this
24 would have been a -- you know, roughly six

1 months after the issue with McLaren Hospital.

2 So I was probably going to get some pricing to
3 try to put into my budget for the next year for
4 testing.

5 Q. Okay. Let me hand you -- I know
6 it's a document that's been previously used
7 today. It's marked as Johnson Exhibit 141. And
8 I believe that you -- it's in the stack. It's
9 the water quality optimization e-mail of
10 March 17 of 2015.

11 MS. SMITH: And I can't believe I
12 don't have five copies of this because
13 I've used it in every deposition, and I
14 think everyone else has, but -- in fact,
15 here we go. Speak of the devil, there
16 it is.

17 MR. CAMPBELL: Exhibit 32?

18 MS. SMITH: Yes.

19 BY MS. SMITH:

20 Q. It was marked by Mr. -- one of the
21 gentlemen today as Exhibit 32?

22 A. Yes.

23 Q. Okay. Terrific. If you could,
24 please review Exhibit 32, which is also marked

1 Johnson Exhibit 141.

2 Now, I note that you're a
3 recipient on this March 17, 2015 e-mail from
4 Mr. Busch.

5 Do you see that?

6 A. Yes.

7 Q. And this was March 17, which would
8 have been three days before your e-mail to
9 Ms. Miskowski where you're -- the e-mail you
10 received from Ms. Miskowski. Does that -- it
11 would appear to be that there -- because of the
12 timing, there's a relationship between the two
13 things. Because if you look on Mr. Busch's
14 e-mail, the fifth item down is "to conduct
15 routine monitoring for Legionella bacteria at
16 the water treatment plant tap and at locations
17 in the distribution system."

18 Do you see that?

19 A. Uh-huh.

20 Q. Okay. Now, do you now recall
21 whether there was -- whether Mr. Busch's e-mail
22 prompted any investigation of direct Legionella
23 testing?

24 A. With the dates, I would assume

1 that it still doesn't stimulate anything, I hate
2 to say, in my memory but --

3 Q. That's okay.

4 A. -- I could see that with the
5 dates. This comes from Mr. Busch. I could see
6 myself trying to get quotes because, like I
7 said, if I was going to use an outside lab, I
8 need to get quotes and get approval and get the
9 money set aside to be able to do anything.

10 Q. And who would have approved those
11 expenditures?

12 A. Mr. Johnson and Mr. Croft.

13 Q. Okay. So when we see references
14 in the record to the city of Flint's testing
15 showing no evidence of Legionella, as Mr. Kim
16 asked you about, that would mean the indirect
17 testing from the HPC test; is that correct?

18 A. That is correct, yes.

19 Q. And, to your knowledge, there's
20 not a single direct Legionella test that was run
21 by anybody with the city of Flint during your
22 term as the water quality laboratory supervisor;
23 is that correct?

24 A. Not to my knowledge, that is

1 correct.

2 MS. SMITH: I'm going to conclude
3 for the day and resume my examination
4 tomorrow. Thank you very much.

5 THE VIDEOGRAPHER: This concludes
6 today's testimony. We are off the
7 record at 5:11 p.m.

8 - - -

9 Thereupon, at 5:11 p.m., on Monday,
10 February 24, 2020, the deposition was adjourned.

11 - - -

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1 CERTIFICATE

2 STATE OF MICHIGAN :

SS:

3 COUNTY OF _____:

4

5 I, MICHAEL B. GLASGOW, do hereby certify
6 that I have read the foregoing transcript of my
7 cross-examination given on February 24, 2020; that
8 together with the correction page attached hereto
9 noting changes in form or substance, if any, it is
10 true and correct.

11

MICHAEL B. GLASGOW

12

13 I do hereby certify that the foregoing
14 transcript of the cross-examination of MICHAEL B.
15 GLASGOW was submitted to the witness for reading and
16 signing; that after he had stated to the undersigned
17 Notary Public that he had read and examined his
18 cross-examination, he signed the same in my presence
19 on the _____ day of _____, 2020.

20

21 _____
NOTARY PUBLIC - STATE OF MICHIGAN

22

23 My Commission Expires:

24 _____, ____.

CERTIFICATE

I, Carol A. Kirk, a Registered Merit Reporter and Notary Public in and for the State of Michigan, duly commissioned and qualified, do hereby certify that the within-named MICHAEL B. GLASGOW was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in the cause aforesaid; that the deposition then given by him was by me reduced to stenotype in the presence of said witness; that the foregoing is a true and correct transcript of the deposition so given by him; that the deposition was taken at the time and place in the caption specified and was completed without adjournment; and that I am in no way related to or employed by any attorney or party hereto or financially interested in the action; and I am not, nor is the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Dexter, Michigan on this 9th day of March 2020.

CAROL A. KIRK, RMR, CSR-9139
NOTARY PUBLIC - STATE OF MICHIGAN

My Commission Expires: August 19, 2022.

- - -

1 DEPOSITION ERRATA SHEET

2 I, MICHAEL B. GLASGOW, have read the transcript
of my deposition taken on the 24th day of February
3 2020, or the same has been read to me. I request that
the following changes be entered upon the record for
4 the reasons so indicated. I have signed the signature
page and authorize you to attach the same to the
5 original transcript.

6 Page Line Change and Reason:

7	_____	_____	_____
8	_____	_____	_____
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24	Date _____	Signature _____	

1 UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF MICHIGAN
3 SOUTHERN DIVISION
4 _____
5)
6) Civil Action No.
7) 5:16-cv-10444-JEL-MKM
8 In re: FLINT WATER CASES) (consolidated)
9)
10) Hon. Judith E. Levy
11) Mag. Mona K. Majzoub
12)
13 _____)

14 HIGHLY CONFIDENTIAL
15 VIDEOTAPED DEPOSITION OF MICHAEL B. GLASGOW
16 VOLUME II

17 Tuesday, February 25, 2020
18 at 8:59 a.m.

19 Taken at: Butzel Long
20 41000 Woodward Avenue
21 Bloomfield Hills, Michigan 48304

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10 ALSO PRESENT:

11 Neal Rogers, Videographer

12

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1	VIDEOTAPED DEPOSITION OF MICHAEL B. GLASGOW	
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23		Copper Report and Consumer	
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1 P R O C E E D I N G S

2 - - -

3 THE VIDEOGRAPHER: We are now on
4 the record. My name is Neal Rogers.
5 I'm a videographer for Golkow Litigation
6 Services. Today's date is February 25,
7 2020 and the time is 8:59 a.m.

8 This video deposition is being
9 held in Bloomfield Hills, Michigan, in
10 re: Flint water cases, Civil Action
11 5:16-cv-10444-JEL-MKM for the U.S.
12 District Court, Eastern District of
13 Michigan, Southern Division.

14 The deponent is Michael Glasgow.
15 Counsel will be noted on the
16 stenographic record. The court reporter
17 is Carol Kirk and will now swear in the
18 witness.

19 We are going off the record at
20 9:00 a.m.

21 - - -

22 (Glasgow Deposition Exhibit 34 marked.)

23 - - -

24 THE VIDEOGRAPHER: We are back on

1 the record at 9:03 a.m.

2 - - -

3 MICHAEL B. GLASGOW

4 being by me previously duly sworn, as hereinafter
5 certified, deposes and says as follows:

6 EXAMINATION (CONT'D.)

7 BY MS. SMITH:

8 Q. Good morning, Mr. Glasgow. I'm
9 Susan Smith. We met yesterday. We're
10 continuing the examination that I started
11 yesterday afternoon.

12 If you could, please look at
13 Exhibit 34, sir.

14 Yesterday you testified concerning
15 a discussion with Mr. Kaplan and others from the
16 EPA regarding chlorine in Flint water, chlorine
17 residual.

18 This is a January 20, 2016 e-mail
19 from Mr. Kaplan to Jim Sygo and Natasha
20 Henderson regarding the chlorine residual issue.

21 Now, do you see on the second
22 paragraph regarding "Task force members are
23 scheduled to discuss this matter on a conference
24 call 1/21/2016 with Mike Glasgow."

1 A. Yes.

2 Q. Sir, do you recall having a
3 conference call with Mr. Kaplan and others from
4 the EPA and MDEQ regarding a chlorine residual
5 issue in Flint?

6 A. I recall having a few meetings
7 with Mr. Kaplan and members of the DEQ. And at
8 one point, yeah, we had weekly conference calls
9 on Friday I know with members of the DEQ staff
10 in regards to this.

11 Q. Okay. And the e-mail discusses --
12 it goes on to talk about characteristics of the
13 water in the distribution system that might
14 impact chlorine residuals.

15 Do you recall any discussions with
16 Mr. Kaplan and his team regarding conditions in
17 the distribution system that might be impacting
18 chlorine residuals?

19 A. I can't say offhand I remember
20 anything in particular.

21 Q. Okay.

22 A. As I said, there were a lot of
23 meetings like this and discussions.

24 Q. Okay.

1 - - -

2 (Glasgow Deposition Exhibit 35 marked.)

3 - - -

4 BY MR. KUHL:

5 Q. Okay. The next exhibit, sir, is
6 Exhibit 35. And this is a copy, as I understand
7 it, Bates-numbered COF_FED_0107016, two-page
8 document, titled "2014 Monitoring Schedule."

9 A. Yes.

10 Q. And just -- is this what the
11 monitoring schedule you received from MDEQ
12 looked like?

13 A. Yes.

14 Q. And is the monitoring schedule
15 that was applicable for the year of 2014?

16 A. Yes.

17 Q. Okay. And could you tell me, sir,
18 where does the HPC test appear on this
19 monitoring schedule?

20 A. I do not see it listed on this
21 monitoring schedule.

22 Q. And -- okay. Are you sure?

23 A. I'll take another look. No, I do
24 not see it listed anywhere.

1 Q. Thank you.

2 - - -

3 (Glasgow Deposition Exhibit 36 marked.)

4 - - -

5 BY MS. SMITH:

6 Q. The next document, I'm going to
7 show this to you -- show it to the camera. I
8 only have one copy. This is not Bates numbered,
9 but I am certain it came from the document
10 productions.

11 It's the City of Flint Water Plant
12 Routine Distribution System Sampling Sites &
13 Additional Water Quality Monitoring Sites.

14 And it lists eight sites, and I'll
15 hand that to you to take a look at.

16 Just one quick question. Does
17 that accurately reflect the eight distribution
18 monitoring sites you testified to yesterday?

19 A. Yes. To the best of my knowledge,
20 yes.

21 Q. Okay. And that's the eight sites
22 where the chlorine residual was tested in the
23 distribution system in 2014 and 2015, correct?

24 A. Correct. Yes.

1 Q. And were those chlorine residual
2 results transmitted into the MOR, the chlorine
3 residual results from the distribution system?

4 A. Yes. From those eight sites, they
5 would have been transferred in.

6 Q. Okay. And, again, were the HPC
7 tests done at those eight sites?

8 A. I'm trying to remember. It seems
9 like after a while, yeah, they were done at
10 those sites. It may have just been on low --
11 areas of low chlorine, though. I can't recall.

12 Q. So was it standard and routine for
13 the water treatment plant staff to test for HPC
14 at these eight distribution sites as part of the
15 regulatory monitoring?

16 MR. MARKER: Object to form,
17 foundation.

18 A. Yeah, I don't believe I would call
19 that something that was standard. I think
20 after, like I said, issues arise where chlorine
21 residuals were really low, then we would perform
22 an HPC test.

23 Q. And the -- the HPC testing when --
24 in areas of low residual chlorine, that's

1 something you testified to in the preliminary
2 exam proceedings in 2018.

3 Do you recall that?

4 A. Yes, vaguely. Yes.

5 Q. Okay. And do you recall
6 testifying in those proceedings at page --
7 approximately 100- -- page 164 that the hydrants
8 were flushed before the HPC testing was done at
9 those locations?

10 MR. MARKER: Object to form and
11 foundation.

12 A. I do not recall if the hydrants
13 were flushed prior to taking an HPC sample.

14 Q. Do you recall testifying in the
15 court proceeding in 2018 that the hydrants were
16 flushed before the chlorine residual tests were
17 taken --

18 MR. MARKER: Same objections.

19 Q. -- in the areas where chlorine
20 residuals were found to be low and below the
21 standard?

22 A. I cannot recall.

23 Q. Is it fair to say through your
24 memory, that these events would have been

1 fresher in 2018 than they are today?

2 A. Oh, yeah. No doubt, yes.

3 Q. Okay. Thank you.

4 And so you wouldn't dispute -- if
5 that is recorded in the transcript of your
6 testimony in 2018, you wouldn't have any reason
7 to dispute that?

8 A. No.

9 MR. MARKER: Objection; form
10 foundation.

11 A. No reason to dispute that.

12 Q. All right. And your depo -- the
13 transcript of your testimony was marked as, I
14 believe, Exhibit 2 yesterday. And if I have
15 time, we'll refer to those specific assertions,
16 but I'm under very tight time limits. I cannot
17 do that right now.

18 - - -

19 (Glasgow Deposition Exhibit 37 marked.)

20 - - -

21 BY MS. SMITH:

22 Q. The next exhibit is Exhibit 37.

23 And it's my understanding that this is -- starts
24 with COF_FED_0112408. And it's a multi-page

1 document ending with 2416.

2 Could you identify this document
3 for us, sir.

4 A. Yes. This appears to be a
5 standard monthly operating report for the city
6 of Flint water plant.

7 Q. Okay. This has been marked as
8 Exhibit 37. It covers the time period -- well,
9 strike that.

10 Does the HPC test appear on this
11 MOR?

12 MR. KUHL: What month is this MOR
13 for?

14 THE WITNESS: August 2015, my copy
15 is anyway.

16 A. It appears to me that the HPC or
17 the standard plate count appears on page 6.

18 Q. And that's page 6 of the results
19 chart, Bates-numbered COF_112413?

20 A. Yes. Correct.

21 Q. Okay. And I see that that refers
22 to "Total Coliform" in the first large column
23 and then "Standard Plate Count," that's the HPC?

24 A. Correct. Yes.

1 Q. Okay. And if HPC doesn't show up
2 in the monitoring schedule from MDEQ, how is it
3 that it shows up in the MOR?

4 MR. MARKER: Objection; form,
5 foundation.

6 A. I just recall -- I don't recall
7 anything in the monitoring schedule. Something
8 to do where we were told to do it at least once
9 daily from the plant tap. I think that was
10 standard with the MOR form that they sent to us.

11 Q. So just so I'm clear, your
12 testimony is that you were instructed by MDEQ to
13 sample for HPC once daily at the plant tap?

14 A. Yes. That was a requirement, yes.

15 Q. Okay. And is that something that
16 you did consistently through 2014 and 2015?

17 A. Yes. Once the plant went into
18 service, yes, that was something that was done
19 daily.

20 Q. Okay. So when we hear testimony
21 concerning the HPC results obtained in 2014 and
22 2015 on Flint water, that would be referring to
23 the samples collected at the plant tap; is that
24 correct?

1 MR. MARKER: Objection; form and
2 foundation.

3 A. Yes. In regards to this report, I
4 would say yes.

5 Q. Sir, are you aware of any HPC
6 tests that were done of water collected anywhere
7 in the distribution system?

8 A. I do have recollections of
9 collecting samples out in the distribution
10 system.

11 Q. Yes. But my question is whether
12 any of those samples were analyzed for HPC. Was
13 the HPC test run on any samples collected in the
14 distribution system, to your knowledge?

15 A. To my knowledge, yes, there was.

16 Q. And where would those results be
17 recorded?

18 A. They would be located in the
19 laboratory, on the laboratory daily bench
20 sheets. I don't recall if they were ever
21 reported with an MOR.

22 Q. And those daily bench seats are
23 records of the city of Flint?

24 A. Correct. Yes.

1 Q. And those are maintained at the
2 city of Flint water treatment plant?

3 A. Yes.

4 Q. And to your recollection, were any
5 of those HPC results above the 2 target range
6 that you referred to yesterday?

7 A. It seems like that I do recall
8 some samples that were above -- above the less
9 than 2. I actually had a reading.

10 Q. Okay. And I'm going to show you
11 the next exhibit, which I believe is 38.

12 - - -

13 (Glasgow Deposition Exhibit 38 marked.)

14 - - -

15 BY MS. SMITH:

16 Q. And, again, I do know that this
17 came from the document production. It appears
18 that the computer system stripped out the Bates
19 number. It's a January 26, 2015 e-mail between
20 Shannon Johnson and Tim Bolen of the DCH, and it
21 includes an e-mail chain.

22 The middle -- and you're not
23 identified on this document, but I want to ask
24 you, Mr. Bolen, in his e-mail, the second e-mail

1 on page 1, refers to -- the third paragraph, it
2 refers to "heterotrophic plate counts that were
3 elevated at 8 sites in the city."

4 A. Yes, I see that.

5 Q. Okay. And do you have -- is that
6 accurate information, to your recollection?

7 MR. MARKER: Object to the form.

8 A. Yeah. To my recollection, it's
9 hard to say. I know there was times -- I mean,
10 elevated at eight sites, that would be every
11 site. It's hard to say, not being involved in
12 this e-mail string.

13 Like I said previously, I do
14 recall sometimes where they were -- they
15 actually registered, and we had heterotrophic
16 bacteria in the samples, but ...

17 Q. Okay. Do you know how Mr. Bolen
18 from the Michigan Department of Community Health
19 would have obtained that information?

20 A. Yeah, to the best of my knowledge,
21 I don't know how Mr. Bolen got this. I don't
22 recall his name or having any interaction with
23 him.

24 Q. Okay. And let me just be clear.

1 We can move on.

2 Do you know of a company called
3 ERAQC?

4 A. ERAQC, sounds familiar. Could
5 have possibly been a company I used for
6 standards in my lab.

7 Q. And what does that company do?
8 Please tell us what function does ERACQ perform?

9 A. Well, they perform a variety of
10 functions. The reason I utilized them was kind
11 of quality control/quality assurance, and also
12 it was stipulated under certification of our
13 laboratory with the MDEQ.

14 So this company, ERA, would send
15 us unknown samples of bacteria basically to test
16 our -- check our test methods and see how we
17 performed the test.

18 Q. Okay. And so the documents from
19 ERAQC would not reflect samples of city of Flint
20 of water? It was samples that they sent you to
21 check the proficiency of your lab technicians?

22 A. Correct. Yes.

23 Q. Okay. And I'm going to just move
24 through a couple documents we talked about

1 yesterday. Johnson Exhibit 141.

2 MR. MARKER: It's marked in the
3 deposition as Exhibit 32.

4 MS. SMITH: Okay.

5 MR. BARBIERI: What was the
6 number?

7 MR. MARKER: This is Exhibit 32.

8 MR. BARBIERI: Thank you.

9 BY MS. SMITH:

10 Q. And I just have one quick
11 follow-up question about this document.

12 Do you know -- we talked about
13 the -- you pursued information from EMSL about
14 Legionella testing. Do you know if any of the
15 other steps identified in Mr. Busch's list here,
16 the six bullet points -- do you know if any of
17 those were pursued at the city of Flint water
18 treatment plant in 2015?

19 A. I do not recall the first -- the
20 first item with "water main pigging and
21 flushing." I don't believe any of that was
22 conducted during my tenure there.

23 The maintenance of the pH levels,
24 I would -- I would say that was something we

1 could attempt to do --

2 Q. Was it done?

3 A. -- and are probably undertook.

4 Yep.

5 And that's about all I can attest
6 for.

7 Q. Okay. Thank you.

8 Back to the MORs for a quick
9 question. And the MOR was Exhibit 37.

10 Now, the MOR reflects data from
11 the regulatory monitoring sampling only,
12 correct?

13 A. Yes. I would say yes.

14 Q. Okay. And so that does not
15 include the inline monitoring, the inline
16 monitor's data?

17 A. Correct.

18 Q. And that does not include the
19 field testing done in citizens' homes, correct?

20 A. Correct.

21 Q. And that does not include any
22 investigatory sampling in any areas of the city
23 with low chlorine, correct?

24 A. Correct.

1 Q. All right. Thank you, sir.

2 I want to change gears here a
3 little bit and ask you about your meetings with
4 McLaren Flint. We heard testimony of a meeting
5 in the fall of 2014. I understand that you were
6 asked to go to McLaren Flint by your supervisor,
7 Mr. Croft; is that correct?

8 A. Yes. It seems like I reported
9 back to a Liz Murphy. It could have been --

10 Q. Ms. Murphy?

11 A. -- Ms. Liz Murphy. Yes.

12 Q. And McLaren was seeking help from
13 city officials concerning this Legionella issue,
14 correct?

15 MR. MARKER: Form and foundation.

16 A. Yes. When I got to the meeting, I
17 guess, you know, that's what they were -- as I
18 said before, I think it was kind of more of a
19 get-together, think tank, to see what the issues
20 were and what could be possible causes.

21 Q. Okay. And did you go to McLaren
22 Flint more than once to talk about this
23 Legionella investigation?

24 A. I believe I was there a second

1 time.

2 Q. And did you ask McLaren to provide
3 you with any information?

4 A. I believe I inquired about their
5 testing results for Legionella throughout the
6 hospital. I don't believe I was ever provided a
7 copy from what I recall.

8 Q. Your e-mail, sir, reflected that
9 you were aware that McLaren was testing their
10 water for Legionella?

11 A. Correct.

12 Q. And so they did disclose to you
13 the results of that testing, correct?

14 MR. KIM: Objection as to
15 foundation and form.

16 A. Yeah, we discussed them in one of
17 the meetings when I was there.

18 Q. Okay. And is there any other
19 information that you asked for from the folks at
20 McLaren Flint concerning this Legionella
21 investigation?

22 MR. MARKER: Form; foundation.

23 A. Not that I can recall.

24 Q. Okay. And did you provide any

1 instructions to the persons at McLaren Flint
2 that you spoke to?

3 A. I don't believe I provided any
4 instructions.

5 Q. Okay. Did you provide them with
6 any recommendations concerning the
7 investigation?

8 A. No, I can't say that I did.

9 Q. Okay. Is there anything that you
10 wanted McLaren Flint to do that they didn't do?

11 MR. MARKER: Form, foundation.

12 A. Other than providing me with their
13 test results, I would say no.

14 Q. Now, did you have any contact with
15 the folks at McLaren Flint after your second
16 meeting? Which I'll represent, according to
17 your e-mails, was in late October of 2014.

18 A. After that second meeting, I don't
19 recall having any conversations with anyone from
20 McLaren.

21 Q. Okay. Do you know of any person
22 that -- did somebody step into your shoes as the
23 primary point of contact for this investigation?

24 MR. MARKER: Form, foundation.

1 A. Not that I'm aware of.

2 Q. Okay. Did you -- did you visit
3 any other hospitals in Flint regarding
4 Legionella?

5 A. No.

6 Q. Okay. How about any other
7 facilities?

8 A. No.

9 Q. Now, you left the city of Flint's
10 employment in April of 2016. Do you have any
11 knowledge as to any Legionella investigation,
12 sampling, or testing that occurred after April
13 of 2016?

14 MR. MARKER: Objection; form,
15 foundation.

16 A. I do not, no.

17 Q. Okay. Now, I'm going to show you
18 what's -- Johnson Exhibit 109, which should be
19 here and everyone should have. Counsel has it.
20 It's been marked.

21 MR. MARKER: What has it been
22 marked as?

23 MS. SMITH: It's Johnson Exhibit
24 Number 109.

1 BY MS. SMITH:

2 Q. And this is a November 3rd e-mail
3 chain between you and Ms. Murphy, correct?

4 MR. MARKER: Do you have --

5 MR. KUHL: It's Exhibit 31.

6 MR. MARKER: Exhibit 31. Okay.

7 BY MS. SMITH:

8 Q. And just one quick question about
9 this.

10 "Just wanted to update everyone on
11 the McLaren Legionella investigation. On
12 Thursday, October 30, I was invited back to
13 McLaren for a meeting."

14 Correct?

15 A. Correct.

16 Q. Okay. And would that reflect the
17 date of your second meeting at McLaren?

18 MR. MARKER: Form, foundation.

19 A. To the best of my knowledge, yes.

20 Q. Okay. And the -- and you learned
21 in that meeting that McLaren had chlorinated the
22 water system and conducted another round of
23 Legionella testing, and you reported that
24 information to your supervisors, correct?

1 A. Correct.

2 Q. Okay. And we discussed the
3 assertion about the no evidence of Legionella in
4 the water coming into the hospital.

5 Now, that was based on the
6 sampling that McLaren was conducting; is that
7 right?

8 A. Correct.

9 Q. Okay. Because you didn't sample
10 the water that was going into the hospital,
11 right?

12 A. No.

13 Q. Okay. And the -- is it fair to
14 say, sir, in the second paragraph of this
15 e-mail, it reflects that your belief was that
16 McLaren was looking to the city water as a
17 potential source of the Legionella that they had
18 found, correct?

19 MR. KIM: Objection to form.

20 A. I do write in there -- I believe
21 originally that the hospital and the health
22 department were looking to find a simple answer
23 to their problem.

24 Q. Okay. And did you ever make a

1 determination as to where the Legionella was
2 coming from that was found in McLaren's water?

3 A. Myself? No.

4 Q. And is that something that you're
5 an expert in, the source of Legionella bacteria
6 found in building pipes?

7 A. No.

8 Q. And you'd agree, though, sir, that
9 building pipes don't come seeded with Legionella
10 bacteria, right?

11 MR. MARKER: Form, foundation.

12 MR. KUHL: Objection to form.

13 MR. KIM: Objections to form
14 foundation.

15 A. I am not aware that they do.

16 Q. Okay. Are you aware, sir, that
17 other persons suspected -- were looking to the
18 city of Flint water as a source of Legionella
19 and Legionnaires' disease?

20 MR. KUHL: Objection. No time
21 frame.

22 A. Yeah, I don't --

23 Q. In 2014.

24 A. I do not recall at that time.

1 Q. Okay. And did you have any
2 communication with anybody at the Department of
3 Community Health, also known as the Michigan
4 Department of Health and Human Services,
5 regarding the Legionella investigation?

6 MR. KIM: Objection as to form.

7 No time frame.

8 Q. In 2014.

9 A. I cannot recall.

10 Q. Okay. And if you'd look at what
11 has been marked as Gnagy Exhibit 47, which
12 includes an October 13, 2014 e-mail from Shannon
13 Johnson at DCH.

14 MR. KIM: What's the Bates number?

15 MS. SMITH: 7-5-2016

16 SOM-KIDD-28853, previously marked
17 multiple times.

18 BY MS. SMITH:

19 Q. If you could, sir, about five
20 lines down in the top paragraph of Ms. Johnson's
21 e-mail that starts, "I spoke with Kim."

22 And it says, "Genesee initially
23 thought the increase was associated with McLaren
24 Flint Hospital as a source, but after Tim and I

1 both reviewed the preliminary data, it was
2 pretty clear that many of the cases did not fit
3 with this hypothesis."

4 And the following sentence, "The
5 current hypothesis is that the source of the
6 outbreak may be the Flint municipal water."

7 So did you ever learn any time in
8 2014 that the persons at the Michigan Department
9 of Health and Human Services were also looking
10 to the possibility that the city of Flint water
11 was the source of Legionella and the increase in
12 Legionnaires' disease?

13 MR. KIM: Objection to form and
14 foundation.

15 MR. MARKER: I'll join.

16 A. I was unaware.

17 Q. And were you aware, sir, in
18 October of 2014 that the Genesee County was
19 seeking testing for Legionella as reflected in
20 Exhibit 47?

21 A. I was not aware of that, that I
22 can recall.

23 Q. And were you aware, sir -- Johnson
24 Exhibit 149, October 7, 2019, EGLE0135246, which

1 is a January 23, 2015 e-mail from some of
2 Ms. Johnson's colleagues at DCH, also known as
3 DHHS.

4 Mr. Collins in his e-mail at the
5 bottom of the page, January 23, 2015 at 11:08
6 a.m., "In a nutshell, we have seen a pretty
7 dramatic increase in the number of cases of
8 Legionellosis in Genesee County with particular
9 focus in Flint."

10 Did I read that correctly?

11 A. Yes.

12 Q. Okay. Were you aware at that time
13 in January of 2015, that the folks at DCH, the
14 state's public health department, recognized
15 that there was a pretty dramatic increase in the
16 number of cases of Legionellosis in Genesee
17 County?

18 MR. MARKER: Form, foundation.

19 MR. KUHL: Objection.

20 A. Yeah. At this time, I don't
21 recall being aware.

22 Q. Okay. And further down in
23 Mr. Collins' e-mail, it indicates, "The fact
24 that this increase in diagnosed cases seems to

1 overlay with the change in Flint water municipal
2 supply from Detroit to the Flint River is
3 concerning."

4 Are you aware that the state's
5 public health authorities were concerned that
6 the increase in Legionellosis cases in Genesee
7 County correlated in time with the switch to the
8 Flint River as the source of water?

9 MR. MARKER: Form and foundation.

10 MR. DAWSON: Let me object to that
11 question under the optional completeness
12 Rule, 106. She should read the next
13 sentence that goes with the sentence she
14 just read so it's not taken out of
15 context.

16 MR. KUHL: And I'll object to form
17 and foundation.

18 BY MS. SMITH:

19 Q. Were you aware, sir, that DCH
20 staff were discussing the possibility that the
21 increased in Legionnaires' disease cases that
22 they recognized correlated in time with the
23 switch to the Flint River as the source of
24 water?

1 MR. KUHL: Objection to form.

2 MR. KIM: Object to form and
3 foundation.

4 Q. You can answer.

5 A. At this time, in early January, I
6 was not aware.

7 Q. Did you ever learn that DCH was
8 discussing that possibility?

9 MR. KIM: Objection to form and
10 foundation.

11 A. Eventually I did learn that --
12 well, was it DHS? Yeah, it had to be DHHS.
13 Eventually I did learn there was some talk in
14 regards to that. Where -- to be honest, where
15 it was coming from, I don't recall.

16 Q. Are you aware, sir, that in
17 January 2016 -- in September 2016, an MDHHS
18 official agreed to a statement of facts in court
19 as part of a plea that she recognized in
20 January -- approximately January 13th of 2015
21 that there was a Legionnaires' disease epidemic
22 in Genesee County that correlated in time with
23 the switch to the Flint River as the source of
24 water?

1 MR. MARKER: Form, foundation.

2 MR. KUHL: Objection as to form
3 and foundation.

4 A. I'm sure sometime after the fact I
5 heard that. I can't recall when it would have
6 been brought to me.

7 Q. Did you have any contact with
8 anybody at -- you had no direct contact with
9 anybody at the DHHS that you recall, correct?

10 A. Correct.

11 Q. And did you have any contact with
12 anybody at the Department of Environmental
13 Quality regarding Legionella or Legionnaires'
14 disease?

15 A. Not -- not that I can recall.
16 There might have been one time. I can't -- no.
17 I'm going to be speculating. I can't remember.

18 MR. MARKER: I apologize. Is
19 there a time frame?

20 Q. Do you have any recollection of a
21 meeting involving DEQ representatives in October
22 of 2014?

23 (Telephone interruption.)

24

1 MS. SMITH: We can hear
2 everything, and you're interrupting my
3 very abbreviated examination, so please
4 mute your phones.

5 BY MS. SMITH:

6 Q. Did you have any knowledge of an
7 October 2014 meeting involving representatives
8 of DEQ?

9 A. Not that I can recall.

10 MR. KIM: Objection as to form.

11 Q. Did you have any contact with any
12 representatives of the United States Centers for
13 Disease Control and Prevention, otherwise known
14 as the CDC?

15 A. No.

16 MR. KIM: Objection as to form.

17 Q. And do you have any knowledge
18 concerning the CDC's role with respect to Flint
19 water issues?

20 MR. MARKER: Form, foundation.

21 A. I do not, no.

22 Q. Do you have any knowledge
23 of -- strike that.

24 Let me jump back to your testimony

1 yesterday. You mentioned that Veolia
2 representatives were in your laboratory doing
3 testing.

4 Do you recall what testing the
5 representatives from Veolia were doing in your
6 laboratory at the Flint water plant?

7 A. It was my understanding it was
8 more process testing simulating what was going
9 on in the plant. So it would have to do with
10 softening and coagulation and ...

11 Q. Okay. Did they run any tests to
12 determine water chemistry or water quality?

13 MR. MARKER: Form.

14 A. I would -- I would have to look
15 back at that -- their report. I don't recall.

16 Q. I'd asked you about your contact
17 with those. Did you have occasion to speak to
18 Mr. Jim Henry regarding the Legionella
19 investigation in Genesee County?

20 MR. KIM: Objection as to form.

21 A. I met him originally at one of the
22 meetings with McLaren. So I had a conversation
23 or two with him.

24 Q. Have you worked with Jim Henry in

1 the past?

2 A. No.

3 Q. Okay. Did you work with him --
4 you mentioned this one meeting at McLaren. Do
5 you recall any communications with him after
6 that meeting at McLaren?

7 A. I don't remember any in
8 particular. There could have been an e-mail or
9 two or a phone call or two, but ...

10 Q. And you testified yesterday, sir,
11 that the -- you testified about the water
12 quality sampling that's reflected in the MORs,
13 the daily testing in your plant and the three
14 times a week testing at the distribution system,
15 correct?

16 A. Correct. Yes.

17 Q. And would you agree with me -- and
18 you were a laboratory supervisor at the Flint
19 water treatment plant, so you understand water
20 sampling and testing; is that a fair statement?

21 MR. KIM: Objection as to form.

22 A. That's a fair statement.

23 Q. Okay. And we talked about the
24 variability of water quality and chemistry

1 yesterday.

2 Would you agree that the sample
3 results are a snapshot in time that reflect
4 conditions in that location at the time the
5 sample was located?

6 MR. MARKER: Form.

7 A. Yes, I would.

8 Q. Okay. And you cannot draw
9 conclusions or inferences about the entire
10 distribution system based on water samples
11 collected in one area at one point in time,
12 correct?

13 MR. MARKER: Objection to form and
14 foundation.

15 MR. KUHL: Objection; form,
16 foundation.

17 A. Correct.

18 Q. And that's why you do the repeat
19 sampling three times a week?

20 MR. KUHL: Objection to form,
21 foundation.

22 A. Yes.

23 Q. The -- what is tuberculation, sir?

24 A. That would be -- happens on the

1 inside of pipes, a buildup of rust and other
2 debris, I guess, in the pipes.

3 Q. And can tuberculation in pipes be
4 disturbed when there are low pressure events?

5 A. Yes.

6 Q. Okay. And what are biofilms, if
7 you know?

8 A. Kind of related to tuberculation.
9 I'll put it in laymen's terms, I guess. The
10 slimy coating on the insides of pipes. It can
11 hold its own little ecosystem.

12 Q. And can biofilms be disturbed in
13 pipes when there are low pressure events?

14 A. Yes.

15 Q. And would you agree with the
16 proposition that there were pressure drops in
17 the water distribution system in 2014?

18 MR. MARKER: Form, foundation.

19 A. Yes.

20 Q. And are water main breaks the type
21 of event that could cause water pressure in a
22 piping system in the Flint distribution system
23 to drop?

24 MR. MARKER: Form and foundation.

1 A. Yes.

2 Q. Okay. Prior to your meetings at
3 McLaren Flint in 2014, did you have any
4 professional experience with Legionella or
5 Legionnaires' disease?

6 A. No.

7 MS. SMITH: If we could go off the
8 record for a moment, please.

9 THE VIDEOGRAPHER: We are going
10 off the record at 9:41 p.m.

11 (Recess taken.)

12 THE VIDEOGRAPHER: We are back on
13 the record at 9:51 a.m.

14 BY MS. SMITH:

15 Q. Mr. Glasgow, just to confirm, you
16 did not make a determination as to the source of
17 any Legionella bacteria that was found in water
18 at McLaren Flint Hospital, correct?

19 MR. MARKER: Form, foundation.

20 A. Correct.

21 Q. And you're not going to be
22 offering any opinions in this litigation
23 regarding the source of Legionella bacteria
24 found at McLaren Flint Hospital, correct?

1 MR. MARKER: Form, foundation.

2 A. Correct.

3 Q. And you testified concerning the
4 MOR testing. I have flagged in your transcript
5 of your testimony in 2018 page 165 of your
6 testimony on April 16 of 2018. And, if you
7 could, review that testimony.

8 MR. CAMPBELL: Which date are you
9 on?

10 MS. SMITH: April 16 of 2018.
11 First page 165, April 16 of 2018.

12 MR. KIM: It's a 180-page
13 document. Are you looking for anything
14 in particular?

15 MS. DEVINE: Page 165.

16 BY MS. SMITH:

17 Q. Have you had a chance to review
18 that testimony, sir?

19 A. Yes, ma'am.

20 Q. And my question is concerning your
21 testimony regarding the hydrant flushing and the
22 chlorine testing. Do you take issue with -- do
23 you stand by your testimony in April of 2018
24 regarding the chlorine testing as reflected on

1 that page?

2 A. Yes, I do.

3 Q. Okay. And if you could turn to
4 page -- the transcript from April 20, 2016,
5 pages 62 to 67.

6 MR. MARKER: 62 through 67?

7 MS. SMITH: Yes.

8 BY MS. SMITH:

9 Q. And I'll represent for the record
10 that your testimony in that section of the
11 April 20, 2018 transcript pertains to chlorine
12 testing and hydrant flushing.

13 Have you had an opportunity to
14 review that testimony?

15 MR. MARKER: Not yet. We're
16 working on it.

17 MS. SMITH: Okay.

18 A. Okay. I've had the chance to
19 familiarize myself with it.

20 Q. Okay. And my question is, sir, do
21 you stand by your testimony in 2018 as reflected
22 in pages 62 to 67 of the transcript that was
23 marked as Exhibit 1 yesterday?

24 A. Yes, I do. My memory was much --

1 MR. CAMPBELL: Objection to form.

2 MR. MARKER: I'll join in the
3 objection.

4 A. Yes. My memory was better in '18,
5 so I would stick with my testimony.

6 Q. Okay.

7 MR. CAMPBELL: Mr. Glasgow, for
8 those of us who are a little bit
9 encumbered, can you keep your voice up,
10 please?

11 THE WITNESS: Yep. I'm sorry.
12 I'll try there.

13 MR. CAMPBELL: Thank you.

14 BY MS. SMITH:

15 Q. And so you would agree, sir, that
16 the practice of hydrant flushing would boost the
17 chlorine results that were collected in samples
18 collected after the flushing process was
19 completed, correct?

20 A. Yes.

21 MR. MARKER: Form and foundation.

22 Q. And would the chlorine residual
23 samples recorded in the MORs collected after the
24 flushing hydrant flushing --

1 MR. MARKER: Form, foundation.

2 Q. -- or before the hydrant flushing?

3 MR. MARKER: Is there a time
4 frame?

5 Q. In 2014 and 2015.

6 A. Usually a low chlorine residual,
7 which would be reported or recorded, would
8 institute the hydrant flushing. So if that
9 clarifies it.

10 Q. So when we see the chlorine
11 residual results reported in the MORs, were
12 those collected -- the results obtained in the
13 field, were those results obtained after the
14 hydrants were flushed?

15 MR. MARKER: Form, foundation.

16 A. On that MOR, you're going to have
17 both situations. Like I said, it's kind of
18 standard practice in the water industry if
19 you've got a low area of chlorine, to open a
20 hydrant or get fresh water there one way, shape,
21 or form. So I would have to say it could be
22 both ways. It could be some prior to flushing
23 and some after.

24 Q. Okay. Do you have any knowledge

1 as to what occurred within the walls of McLaren
2 Flint Hospital with respect to the Legionella
3 investigation after your second meeting with
4 them in apparently late October of 2014?

5 MR. MARKER: Form and foundation.

6 A. No, I can't contest anything.

7 Q. No. My question is, sir, whether
8 you have any personal knowledge of any steps
9 that McLaren Flint was taking within their
10 hospital after your second meeting with them in
11 approximately October of 2014?

12 A. Yes. I have no information on any
13 actions they were taking.

14 MS. SMITH: That's all I have for
15 now. Thank you.

16 If we could have a counting of
17 time.

18 THE VIDEOGRAPHER: We're going off
19 the record at 10:00 a.m.

20 (Recess taken.)

21 THE VIDEOGRAPHER: We are back on
22 the record at 10:10 a.m.

23 - - -

24 EXAMINATION

1 BY MS. JACKSON:

2 Q. Good morning, Mr. Glasgow. My
3 name is Krista Jackson.

4 A. Good morning.

5 Q. I'm an attorney representing
6 Stephen Busch, and I'm going to continue asking
7 you a couple questions.

8 I want to sort of start out -- I'm
9 going to try very hard not to be repetitive to
10 things that have been asked before, but I just
11 wanted to get a little bit more information on
12 your educational background.

13 Can you tell me how far you went
14 in your education, formal education?

15 A. I did receive a bachelor's degree
16 in biology and chemistry from Central Michigan
17 University.

18 Q. And what year was that?

19 A. I graduated in '98.

20 Q. And did you go on in school after
21 that?

22 A. No, I did not.

23 Q. Okay. And was that a bachelor's
24 of science?

1 A. Yes.

2 Q. Since you graduated from college,
3 have you done any technical training, you know,
4 any more formal but not necessarily within a
5 school?

6 A. Well, I'll say in the water and
7 wastewater industry, there's numerous training
8 classes or seminars I've attended over the
9 years. Nothing with a formal school.

10 Q. Do you receive certificates from
11 those seminars or just a record of attendance?

12 A. Some will have certificates. And
13 most of the seminars like that are in regards to
14 continuing education credits to keep my water
15 and wastewater licenses current.

16 Q. And for the majority of the time
17 that you were at the Flint water treatment
18 plant, your role was as laboratory supervisor;
19 is that correct?

20 A. That is correct, yes.

21 Q. Okay. And who was your supervisor
22 when you were within that role?

23 A. Originally when I was -- left the
24 city of Flint wastewater plant to go to the

1 water plant, the water plant supervisor was
2 Jeffrey Bryson. So I guess he originally hired
3 me over in that position.

4 Not long after Mr. Bryson retired,
5 then my supervisor was a William Daniels. He
6 was there for a couple years before he retired.
7 And then it was Mr. Brent Wright.

8 Q. And did they all hold the same
9 position?

10 A. Yes, they did. Yes.

11 Q. Okay. And what position is that?

12 A. That would be water plant
13 supervisor.

14 Q. Okay. And I'm just going to use
15 Mr. Wright as an example. Who would
16 Mr. Wright's direct supervisor have been then?

17 A. Then it would have -- he would
18 have -- the chain of command, I guess, would go
19 to the utilities director, which would have been
20 Mr. Daugherty Johnson.

21 Q. And then who would Mr. Johnson's
22 supervisor have been?

23 A. And then Mr. Johnson's supervisor
24 would have been department of -- or director of

1 public works, Mr. Howard Croft.

2 Q. And then who would Mr. Croft's
3 supervisor have been?

4 A. To be honest, I assumed usually it
5 was the mayor or the emergency manager.

6 Q. And then in your role as
7 laboratory supervisor, how many people did you
8 supervise at the time that you received that
9 role?

10 A. Oh, there was two other lab staff,
11 so -- yeah, two individuals.

12 Q. And then did the amount of people
13 that you supervised in that role increase at the
14 time that the water plant became a full-time
15 water plant, or shortly before?

16 A. Yeah, I'll say shortly before my
17 departure. It was greatly increased. So are we
18 talking while I'm at the water plant or --

19 Q. So let's say between the time that
20 the decision was made to switch to a full-time
21 plant and use the Flint River water, was there
22 an increase in the number of people you
23 supervised as laboratory supervisor?

24 A. No, there was not.

1 Q. Okay. And then at the time that
2 the water switch occurred in April 2014, for the
3 remainder of 2014, did you receive any
4 additional staff under you at that point?

5 A. I would have to look back at
6 dates. I believe just prior to putting the
7 plant in operation, I was given a dual title as
8 laboratory supervisor and assistant water plant
9 supervisor. So at that time, I would have had
10 the entire water plant staff underneath me.

11 Q. Okay. Did that include an
12 increase in lab staff, or was it just because of
13 the change in your role, your umbrella got
14 bigger?

15 A. My umbrella got bigger. There was
16 no new or added employees into the laboratory.

17 Q. And you said you were -- I'm
18 sorry -- co-director? What did you say?

19 A. Yeah, it was a combo title. So
20 originally I was laboratory water quality
21 supervisor. And then they also gave me the
22 title of assistant water plant supervisor.

23 Q. And those were internal Flint job
24 titles. In addition, you also were the operator

1 in charge under the Safe Drinking Water Act,
2 correct?

3 A. Correct.

4 Q. In your role as laboratory
5 supervisor, prior to the water switch, did you
6 have communications with MDEQ employees?

7 A. Yes. Most notably that sticks in
8 my memory was Mr. Prysby. He was our district
9 engineer. So I had, I'll say, numerous contacts
10 with Mr. Prysby.

11 Q. And what would the content of
12 those contacts be?

13 MR. MARKER: Objection; form,
14 foundation.

15 Any time before the switch?

16 MS. JACKSON: During his time as
17 laboratory supervisor prior to the
18 switch.

19 A. Yeah, it would be numerous
20 instances. Mr. Prysby would come around every
21 few years for a sanitary survey. I would be in
22 contact with him with that.

23 Any items or questions I had in
24 regards to our monthly operation report would be

1 directed to him. Any extra testing or
2 discussing testing results would have been with
3 him. He was -- he was my main contact.

4 Q. I believe you testified earlier
5 that you got your monitoring requirements from
6 Mr. Rosenthal; is that correct?

7 A. That is correct.

8 Q. And was that true prior to the
9 switch as well?

10 A. Prior to the switch when we would
11 get -- our monitoring schedule is usually mailed
12 to the city. And if my memory serves me
13 correct, it was signed by both Mr. Prysby and
14 Mr. Rosenthal.

15 Q. Okay. And then after the switch,
16 how did your communications with the employees
17 of the MDEQ change?

18 A. Well, after the switch, I
19 remember --

20 MR. MARKER: I'll object to the
21 form and foundation.

22 A. Yeah, after the switch I remember
23 it just seems like Mr. Busch was around more
24 frequently. In the past, it had always been

1 just Mr. Prysby either visiting our plant or
2 talking with me.

3 After the switch, Mr. Busch was
4 around more or in discussions more. And as time
5 went on, I'll say there's a couple other
6 individuals from the DEQ at the time that I
7 would have discussions. I remember Mr. Jim
8 Sygo. There was also occasions that I can
9 vaguely recall meeting Mr. Pat Cook, Ms. Liane
10 Shekter-Smith.

11 But the majority of my interaction
12 prior and after the switch were Mr. Prysby and
13 Mr. Busch for the most part that I can recall.

14 Q. But you continued to get the
15 monitoring schedules from Mr. Rosenthal after
16 the switch?

17 A. I will -- I will say yes.

18 Q. When you received those monitoring
19 schedules, did you -- was there a chance to
20 review them and ask questions of the MDEQ?

21 A. No. Usually sometime towards the
22 end of January in the calendar year, so let's
23 say it's January of 2010, near the end of
24 January, I would receive a letter in the mail

1 from Mr. Prysby and Mr. Rosenthal with the
2 monitoring schedule. But I don't recall any
3 discussions or questions. It was kind of
4 straightforward there what we -- what we were
5 required to do.

6 Q. Would you say that you didn't --
7 you would have had the opportunity to ask
8 questions? You just didn't need to?

9 MR. MARKER: Form, foundation.

10 A. I will say that's a fair
11 statement. If I had issues, I could have
12 discussed them with Mr. Prysby or Mr. Rosenthal.

13 Q. In your role as laboratory
14 supervisor after the switch in 2014, what
15 reports were you required to provide to the
16 MDEQ?

17 A. Oh, the one sticks out the most is
18 our monthly operating report. There would also
19 be a couple annual reports that were required;
20 cross connections, annual pumpage report. And
21 if necessary, the lead and copper report as
22 well.

23 Q. Are you aware of whether there
24 were other reports being generated out of the

1 Flint water treatment plant that were not your
2 responsibility?

3 MR. MARKER: Form, foundation.

4 MR. KIM: Objection.

5 A. I'm not aware. Once I was
6 designated the OIC, the operator in charge, most
7 reports would have had to have my signature.

8 Q. Did anyone at the MDEQ ever
9 contact you after those reports, the monthly
10 operating reports, were submitted to ask for
11 follow up with any questions regarding the
12 report?

13 MR. MARKER: Is there a time
14 frame?

15 Q. Any monthly operating report.

16 MR. MARKER: Object to form and
17 foundation.

18 A. I -- I cannot recall an instance
19 where there was questions on a monthly operating
20 report.

21 Q. What about the annual reports that
22 you submitted, the cross connections and annual
23 pumpage reports?

24 MR. MARKER: Form, foundation.

1 A. Not to my recollection, no.

2 Q. What was your role, if any, in
3 making the determination as to whether the water
4 treatment plant could handle the transition to a
5 full-time plant and properly treat the Flint
6 River water?

7 MR. KIM: Objection as to form.

8 A. Well, prior to the switch, coming
9 up with the decision to switch, I will say I did
10 not have a significant amount of input.

11 Q. Did you provide any information to
12 either the emergency managers or Mr. Croft or
13 Mr. Johnson that they requested with respect to
14 the analysis of this transition?

15 MR. MARKER: Objection; form.

16 A. I possibly passed along data from
17 testing probably from previous test runs. But,
18 yeah, offhand, nothing is really jumping out at
19 me.

20 Q. Did you attend any meetings
21 regarding discussions on the transition?

22 A. There's -- there was at least a
23 couple meetings. To try to remember what was
24 discussed or what the time frame was is a little

1 difficult for me.

2 Q. And were you at those meetings
3 as -- I'm sorry. I'm going to rephrase the
4 question.

5 Were you at those meetings to
6 provide information regarding the plant and its
7 operations?

8 MR. MARKER: Objection; form.

9 MR. KIM: Objection as to
10 foundation.

11 A. I will say possibly.

12 Q. Do you remember speaking during
13 those meetings?

14 A. I'm sure I had a comment or two.
15 Like I said, unless we had a specific meeting
16 and date I -- there was a lot of meetings over
17 the years leading up to the switch, and then
18 even after the switch. So I apologize. A lot
19 of it blends together.

20 Q. And can you remind me when you
21 obtained your F1 license?

22 A. I'm going to say either 2011 or
23 2012.

24 Q. Did you obtain the license in the

1 anticipation of the water treatment plant
2 switching to being a full-time operating plant?

3 MR. MARKER: Form, foundation.

4 A. No. I was going for that license
5 regardless of whether we were going to be full
6 time or not.

7 Q. What are the testing requirements
8 for getting that license?

9 MR. MARKER: Form, foundation.

10 A. Well, there's a number of
11 requirements to even qualify to take the exam.
12 And then when it comes down to it, it's a
13 written exam administered by the DEQ.

14 Q. You said you took it at the same
15 time as the test for the F2 license; is that
16 correct?

17 A. That is correct, yes.

18 Q. But was it two separate tests?

19 A. Yes, it was.

20 Q. Are there education requirements
21 to sit for that F1 license test?

22 MR. MARKER: Form, foundation.

23 A. Yes.

24 Q. Is it the type of test that you

1 studied for, or did you have the knowledge based
2 on your experience at the plant?

3 A. I'd have to say it's a
4 combination. You had a lot of the knowledge
5 from your day-to-day work, but you would also
6 have to brush up on regulations and different
7 other things that would be on the exam.

8 Q. Are there products out there that
9 sort of give you an idea of what to study for
10 that type of test?

11 MR. MARKER: Form.

12 A. Yes, there's different exam study
13 guides and different classes you could take.

14 Q. Did you consult those guides or
15 take any of those classes?

16 A. Over my history of my career, I
17 took numerous classes in regards to information
18 in the water field that could be used for the
19 testing. So I'll say yes.

20 Q. But you didn't take any -- or did
21 you take any specifically to prepare for the F1
22 license?

23 A. No, I didn't take any.

24 MR. MARKER: Object to form.

1 A. I didn't take any specifically to
2 prepare.

3 Q. And you passed that test on the
4 first try?

5 A. Correct. Yes.

6 Q. And with respect to the F1
7 license, are there continuing education
8 requirements?

9 A. Yes, there is.

10 Q. And what are those requirements,
11 to the best of your knowledge?

12 A. Yeah, to the best of my knowledge,
13 they use the word "CEC," continuing education
14 credits. So for the F1 license, without looking
15 it up, it seems like every three years, you
16 needed to renew your license once you attained
17 it.

18 And you needed to acquire 2.4 CECs
19 or continuing education credits through various
20 classes or education and training, some in the
21 technical field, some in the managerial field.
22 I don't remember how that breakdown was set up,
23 but ...

24 Q. And you still have that license,

1 correct?

2 A. Yes, it is current. It is up to
3 date.

4 Q. And do you need it for your
5 current position?

6 A. I do not need it for my current
7 position as I work for a smaller town now.

8 Q. Is there a particular date on
9 which you became the operator in charge of the
10 Flint water treatment plant?

11 A. Not that I can recall. But I will
12 say it was probably the day I got the results
13 from taking that F1 exam. Because at that time
14 nobody else in the city had a current F1
15 license.

16 Q. Did the water treatment plant need
17 an operator in charge when it was just a backup
18 plant?

19 MR. MARKER: Form, foundation.

20 A. There was a requirement that we
21 needed an F1 in charge, yes.

22 Q. What was -- who had that role
23 prior to you getting your F1 license then?

24 A. Prior to me, the original

1 gentleman that hired me at the water plant,
2 Mr. Jeff Bryson, I know he had his F1. And then
3 after he retired, we didn't have an F1 in the
4 city. And I believe we utilized a gentleman
5 from Genesee County who had originally worked
6 for the city of Flint for a couple years.

7 That's to the best of my
8 recollection.

9 Q. Was there any change to your
10 day-to-day duties after you became the operator
11 in charge?

12 A. I'm going to say there was. It
13 wasn't dramatic. It was mainly certification of
14 a lot of those reports that would have to be
15 sent to the state.

16 Q. How did -- did your view of your
17 role at the water treatment plant change when
18 you received that title of operator in charge
19 other than the certification of the reports?

20 A. I will say yes, because just in
21 certifying those reports, yeah, I was signing
22 off on them. So I would, you know, attempt to
23 understand and ascertain where all the
24 information from them reports were generated. A

1 lot of times it was from other employees. So I
2 will say my role changed slightly.

3 Q. And did your chain of command
4 change at all? Did you become either an equal
5 with Mr. Brent Wright or his supervisor in any
6 way?

7 A. I will say I wasn't really his
8 supervisor in any way. It was just the way I
9 guess the chain of command was set up prior to
10 me getting the F1.

11 I was -- yeah, never offered a
12 supervisor job there or anything. We kind of
13 just decided to share duties, so to speak.

14 Q. Did you do any review of the Safe
15 Drinking Water Act or its regulations to see
16 what the requirements were of being an operator
17 in charge?

18 MR. MARKER: I'm going to object
19 to form.

20 A. I can't say that I necessarily
21 reviewed it. Being in the field for a
22 significant number of years, I'll say I had had
23 some idea of what that entailed. But I don't
24 recall after getting the license, you know,

1 picking through it to see exactly.

2 Q. Do you believe you've ever read
3 the definition under the Safe Drinking Water Act
4 regulations of an operator in charge?

5 A. I'm sure at one time or another, I
6 have.

7 Q. I'm going to read it to you now.
8 You can just for purposes of this deposition
9 only take my word that I'm reading this
10 correctly, but it says it means "A certified
11 operator who is designated by the owner of a
12 public water supply as the responsible
13 individual in overall charge of a water works
14 system or portion of a water works system who
15 makes decisions regarding the daily operational
16 activities of the system that will directly
17 impact the quality or quantity of drinking
18 water."

19 And that's Michigan Admin Code
20 R32510106.

21 Is that familiar to you?

22 A. Vaguely, yes.

23 Q. Okay. And does it comport with
24 your understanding of what an operator in charge

1 was responsible for?

2 A. I would say so, yes.

3 Q. At the time you became the
4 operator in charge, did you speak with anyone at
5 the MDEQ about what that role meant or what your
6 responsibilities were?

7 A. I don't recall. I may have. I
8 remember getting a call, phone call, from
9 Mr. Prysby congratulating me on passing the
10 exam.

11 So we may have had some
12 discussions, but I do not recall.

13 Q. You testified yesterday about how
14 you and Mr. Wright divided up the duties. You
15 made a comment that part of the administrative
16 duties that you guys agreed would fall to
17 Mr. Wright were communications with the state.

18 What specifically did you mean by
19 that?

20 A. Oh, mainly correspondence. I
21 believe most correspondence from the state to
22 the city of Flint would still have Mr. Wright's
23 name on them. A lot of times I would be cc'd.

24 Q. Other than reports, what kind of

1 correspondence would there be with the state?

2 A. Well, I don't want to say
3 routinely. But, you know, there would be
4 correspondence, letters of different issues, or
5 new things coming up or proposed rule changes.
6 In regards to the Safe Drinking Water Act, there
7 would be correspondence in that aspect.

8 Q. Would this generally be
9 correspondence generated by the state to the
10 water treatment plant or from the water
11 treatment plant back to the state?

12 A. To my understanding, it went both
13 ways. I believe Mr. Wright would have also
14 prepared things to send to the state in regards
15 to certain issues. I can't think of any
16 specifics offhand here.

17 Q. And by "the state," do you mainly
18 mean the Michigan Department of Environmental
19 Quality, or were there other agencies that you
20 interacted with?

21 A. No. I'm sorry. I mainly mean the
22 Department of Environmental Quality.

23 Q. How did the requirements for
24 staffing change after the switch from a backup

1 plant to a full-time plant?

2 A. Well, the requirements from my
3 perspective was that we went from a standby
4 plant which we weren't in operation, so most
5 people were just on first shift.

6 As we went into full-time
7 operations, we needed to staff three shifts
8 around the clock. So in my eyes, you know, the
9 staff needed to pretty much double.

10 Q. Were new positions created, or was
11 it just that you needed more people at the same
12 positions?

13 A. I believe we had to create a new
14 class of people to term -- and they were, I
15 guess, termed the water plant operators. Prior
16 to standby, we didn't really have operators. We
17 had operator foremen.

18 But for the most part, it was
19 just -- other than making the new classification
20 of water treatment plant operators, it was just
21 an issue of adding more bodies.

22 Q. And did you consider having the
23 appropriate staff on site for those three shifts
24 as one of your responsibilities as the operator

1 in charge?

2 MR. KIM: Objection as to form.

3 A. I would say yes, to an extent.

4 Q. Did you create the schedules for
5 employees?

6 A. Like the work schedules and shift
7 setups?

8 Q. Yes.

9 A. Yeah. Usually in conjunction with
10 Mr. Wright, we would sit down and put that
11 together.

12 Q. And you ensured that there was a
13 person of each required designation or licensure
14 at the plant?

15 A. At all times, yes.

16 Q. The monitoring plans and
17 monitoring schedules -- and forgive me if I'm
18 not using those -- stating those correctly.

19 But were they redone at the time
20 of the switch? Did you receive revised
21 monitoring schedules?

22 A. Yes, prior to the switch of
23 full-time operation, I knew our monitoring
24 schedule would change. And, yeah, that was

1 probably one of the e-mails I sent to
2 Mr. Rosenthal kind of pleading him, like "I need
3 a monitoring schedule. We're going to be in
4 operation soon," so ...

5 Q. In years other than when the
6 switch occurred -- and correct me if I am
7 wrong -- the monitoring schedule would come out
8 in January, and then you would get one annually?

9 A. Correct. Yes.

10 Q. Prior to the switch, did you meet
11 with anyone from the DEQ to discuss what
12 upgrades and construction needed to occur to
13 prepare the plant for full-time use?

14 A. I'll say yes. Like I said, it's
15 vague, but I know there was numerous meetings
16 prior with engineering firms and with the state,
17 DEQ, and water plant staff in regards to that,
18 yes.

19 Q. And by "numerous," can you
20 quantify that at all?

21 A. Oh, I don't know if I can put a
22 direct number on it. I would say, for instance,
23 in the year 2013, leading up to the switch,
24 there was probably at least a half dozen

1 meetings that I can recall.

2 I'm sure there was other
3 correspondence between city of Flint's
4 engineering firm and the state as well.

5 Q. Do you recall specifically from
6 the MDEQ what individuals you met with to
7 discuss those upgrades or changes to the plant?

8 A. Most of the time, my memory seems
9 to lead me to Mr. Prysby and Mr. Busch. As
10 always, Mr. Prysby was always my first contact
11 being our district engineer. But I do remember
12 Mr. Busch around as well.

13 And I don't recall if it was prior
14 to the switch or just after when I remember a
15 couple other individuals from the DEQ. As I
16 stated before, maybe Mr. Cook or Mrs. Liane
17 Shekter-Smith.

18 Q. Are you aware what Mr. Busch's
19 role with the MDEQ was at the time of the
20 switch?

21 A. You know, to be honest, I will say
22 no. I just understood that I thought he was
23 next up in the chain of command from Mr. Prysby.

24 Q. How about Ms. Shekter-Smith?

1 A. No, I did not really understand
2 her role, to be honest.

3 Q. Approximately how many times did
4 you meet Ms. Shekter-Smith?

5 A. Oh, I want to say just a couple.
6 I don't have a lot of recollection with a lot of
7 discussions, but I do remember her being at our
8 treatment plant a time or two.

9 Q. But you don't recall if that was
10 before or after the switch?

11 A. No. I cannot recall at this time,
12 no.

13 Q. And do you know what Mr. Sygo's
14 role was at the MDEQ?

15 A. It seems like -- I didn't know
16 exactly. It seemed like he was deputy director.
17 He was fairly high up in the organization. And
18 I never had interaction with him until after the
19 switch.

20 Q. With respect to meeting with
21 Mr. Busch and Mr. Prysby to discuss changes to
22 the plant to prepare it for the switch, can you
23 explain to me a little bit about how those
24 meetings or interactions would go?

1 Would it be that you would propose
2 what you thought needed to be done, and they
3 would provide comment, or did they go around and
4 dictate to you what needed to be done?

5 MR. MARKER: Objection; form,
6 foundation.

7 A. From what I can recall, it seemed
8 like it was -- it was more of a back and forth.
9 I don't want to say there was -- from what I can
10 kind of remember, the city was proposing we were
11 going to go into full-time operation.

12 I believe we had our engineering
13 firm there as well, or items from the
14 engineering firm that they understood we might
15 need to do. I'd pass that along to Mr. Busch
16 and Mr. Prysby, and they could elaborate. It
17 was more of a back and forth; you know, this is
18 what we want to do, what do we need to do to get
19 here, and that type.

20 Q. And then what was the internal
21 process for obtaining funding for these changes?

22 A. Funding for these changes?

23 MR. KIM: Objection to form,
24 foundation.

1 A. Yeah, I will say I wasn't all that
2 familiar with that.

3 Mr. Wright, sitting in the
4 position as supervisor, developed our budgets
5 every year, put in requests to the city
6 officials. So I -- I don't personally recall
7 any -- any involvement with the funding issues.

8 Q. Were you responsible for creating
9 the permits to submit to the DEQ for those
10 upgrades or changes?

11 A. Most of the time we deferred that
12 to our engineering firms.

13 Q. Did you sign the permits or
14 permanent applications?

15 A. I don't recall. I can't remember
16 signing any permit apps. I very well could
17 have, but I don't recall any offhand.

18 Q. And then after the permit
19 applications were submitted to the MDEQ, did you
20 have any correspondence with anyone at the MDEQ
21 regarding those permits prior to their approval?

22 A. I can't say that I did, no.

23 Q. Do you know if the permits had
24 to -- permit applications had to be changed in

1 any way to obtain MDEQ approval?

2 A. Offhand, I can't say I do.

3 Q. Between 2013 and on the end of
4 your tenure at the Flint water treatment plant,
5 just generally about how often would you go and
6 look at the Safe Drinking Water Act or its
7 regulations?

8 MR. MARKER: Objection; form,
9 foundation.

10 A. Oh, that's hard to say. I would
11 say, you know, a couple times a year I would
12 probably have to peek through it to look, but I
13 can't put a number on hand how many times I
14 would have.

15 Q. And would you do that in response
16 to a specific issue?

17 A. Most likely. It would usually
18 have to be something that I didn't have stored
19 in my knowledge in my head there, so -- or
20 something to refresh or clarify.

21 Q. Would you agree that under the
22 Safe Drinking Water Act, that the city of Flint
23 was responsible for ensuring that the Flint
24 water treatment plant met the Safe Drinking

1 Water Act safe staffing requirements?

2 MR. MARKER: Objection; form,
3 foundation.

4 A. I will say yes.

5 Q. And was the city of Flint
6 responsible for ensuring that the water
7 treatment process met standards?

8 MR. KIM: Objection; form,
9 foundation.

10 A. I would say yes.

11 Q. And the city of Flint was
12 responsible for maintaining the distribution
13 system?

14 MR. MARKER: Objection.

15 MR. KIM: Objection.

16 A. I would say yes.

17 Q. And the city of Flint was
18 responsible for evaluating the effect of the
19 treated water on that distribution system?

20 MR. KIM: Objection as to form.
21 Calls for a legal conclusion.

22 MR. MARKER: Objection; form and
23 foundation.

24 A. I would say yes.

1 Q. You stated in your testimony that
2 a number of things were done and reviewed in
3 preparing for the switch.

4 You had data from a test run, a
5 30-day test run, correct?

6 A. Correct. Yes.

7 Q. And data from the prior plant
8 operation as a standby plant?

9 A. Yes.

10 Q. And data regarding the sort of raw
11 Flint River water?

12 A. Correct. Yes.

13 Q. And did you personally analyze
14 those different pieces of data?

15 A. Yeah, I'm sure I had glanced
16 through it all. Most of the data I generated
17 myself in the laboratory.

18 Q. And did you share any of your
19 conclusions or analysis of that data the MDEQ?

20 A. Yeah, I shared all data with the
21 MDEQ, even test runs prior to the switch and
22 prior to the long test run in '13. After every
23 test run, I would send data to Mr. Prysby at the
24 MDEQ.

1 Q. Did you -- maybe I wasn't clear.

2 Did you share your analysis?

3 MR. KIM: Objection as to form.

4 MR. MARKER: I'll join.

5 A. My analysis. I guess in my eyes,
6 always an analysis of the data wasn't necessary.

7 The data kind of would speak for itself.

8 Q. Did the MDEQ have any role in the
9 30-day test run?

10 MR. MARKER: Objection to form.

11 MR. CAMPBELL: Object to form.

12 A. I don't know if I'd say they had a
13 role. I do remember a visit from Mr. Prysby
14 during the 30-day test run.

15 Q. Was that test run required by the
16 MDEQ?

17 A. I'm going to say no, it wasn't
18 required by the MDEQ. I think that was more of
19 an internal city -- city-prescribed test run to
20 really shake down our equipment and see what an
21 extended run would look like for us.

22 Q. Do you recall discussing with the
23 MDEQ prior to the switch differences between
24 Flint River water and Lake Huron water?

1 A. I don't recall offhand. I'm sure
2 there was a couple discussions, just because we
3 knew treating the Flint River water would be
4 much more involved than treating Lake Huron
5 water.

6 Q. Do you recall speaking with them
7 about increased microbial risks from the Flint
8 River water?

9 A. I do not recall.

10 Q. Any additional regulatory
11 requirements for using Flint River water?

12 MR. MARKER: Objection; form,
13 foundation.

14 A. I don't really recall. I imagine
15 there would be at least a couple items we could
16 have discussed. But a time frame or what and
17 when and where, I can't pull -- pull from my
18 mind.

19 Q. Do you recall discussing softening
20 with anyone at the MDEQ in relation to using
21 Flint River water?

22 A. Yeah. I'll say I'm sure we had
23 discussions about softening. I don't recollect
24 what it entailed or how, I guess, involved of a

1 conversation it was, other than the fact that we
2 were -- my understanding that, you know, we
3 were -- it was recommended or almost required
4 that we would soften the water there.

5 Q. Did you discuss turbidity or the
6 risk of -- increased risk from disinfection
7 byproducts?

8 MR. MARKER: Objection; form.

9 A. I do not recall in regards to
10 disinfection byproducts or turbidity, for that
11 matter. The turbidity issue, that was kind of
12 known. We had the data from analyzing the river
13 over years. So we knew it had changed and could
14 be significantly higher than as compared to
15 treating, like, a Lake Huron water.

16 Q. Do you recall specifically with
17 respect to these topics, who you would have had
18 those conversations with, the ones that you do
19 recall having?

20 A. Yes. Most likely, it would have
21 been Mr. Prysby.

22 Q. Okay. Do you recall having any of
23 those conversations with Mr. Busch?

24 A. I don't recall.

1 Q. Mr. Cook?

2 A. No. The only conversations with
3 Mr. Cook I can recall seem to be after the
4 switch and after the fact, because it was my
5 understanding he was kind of a treatment
6 specialist.

7 Q. Mr. Rosenthal?

8 A. No conversations with
9 Mr. Rosenthal.

10 Q. Okay. How about
11 Ms. Shekter-Smith?

12 A. Not that I can recall, no.

13 Q. Did the MDEQ assist you in
14 obtaining any funding for changes to the water
15 treatment plant that you're aware of?

16 A. Not that I'm aware of.

17 Q. Okay. Did you ever discuss
18 getting loans or anything -- not from the MDEQ,
19 but did you discuss having to obtain loans or
20 options for loans with anyone at the MDEQ to
21 fund different things at the water treatment
22 plant?

23 A. No, not that I recall.

24 Q. I'm going to ask you to look at

1 Exhibit 24. It's an April 17, 2014 e-mail. And
2 this e-mail has been discussed during this
3 deposition, so I think you would be aware of its
4 content at this point.

5 Were you aware at the time that
6 you sent this e-mail, that Mr. Prysby was on --
7 was out of the office for an extended period of
8 time? Do you recall that?

9 A. I did not recall that until
10 reading Mr. Rosenthal's response to my e-mail.

11 Q. And you -- and correct me if I am
12 wrong, but you testified that this e-mail mostly
13 had to do with concerns regarding the readiness
14 of the staff; is that correct?

15 A. Yes. Correct.

16 Q. And that you didn't speak to
17 anyone at the MDEQ about this e-mail or follow
18 up in person with anyone at the MDEQ about the
19 content of this e-mail?

20 MR. MARKER: Objection; form.

21 A. No, I did not.

22 Q. The e-mail was to Mr. Rosenthal
23 with copies to Mr. Busch and Mr. Prysby,
24 correct?

1 A. Correct.

2 Q. Were any of them that you recall
3 at the plant in the days between October 17 and
4 the date that the water switch occurred on --
5 I'm sorry. April 17 -- the day the water switch
6 occurred on April 24?

7 A. I don't recall. For some reason,
8 though, in my memory it seems like Mr. Prysby
9 and Mr. Busch were there on the day of the
10 switch.

11 Q. And you didn't at that point
12 discuss the e-mail with them at all or the
13 content of the e-mail?

14 MR. MARKER: Objection; form.

15 A. No, I did not.

16 Q. I believe you testified that this
17 e-mail was, you know, essentially a request for
18 some assistance; is that correct?

19 MR. MARKER: Objection; form.

20 A. I would say yes.

21 Q. Okay. What assistance were you
22 hoping to get? What did you think the MDEQ
23 could do with respect to staffing?

24 A. I didn't think the DEQ could

1 necessarily do anything in particular with
2 staffing. I was hoping they would just delay
3 our switch. And showing them my concerns,
4 thought, you know, they could help me with that.

5 Q. To the best of your knowledge,
6 what authority did the MDEQ have to delay the
7 switch?

8 MR. MARKER: Objection; form,
9 foundation.

10 A. I'm going to err on what I said
11 before. They kind of have a dual role for me, a
12 coach and a cop, and I -- it was under my
13 assumption that they could stop or start us any
14 time they wanted. They could say yes or no.

15 Q. But you don't have any specific
16 knowledge of that authority, correct?

17 A. Correct.

18 MR. MARKER: Objection; form.

19 A. Correct.

20 Q. And I believe you stated that you
21 had expressed your concerns about staffing with
22 Mr. Daugherty -- I'm sorry -- Mr. Johnson or
23 Mr. Croft?

24 A. Correct. Yes.

1 Q. And that essentially those
2 concerns were ignored?

3 A. I could say they were ignored. I
4 know they were -- I would hear the thing "We're
5 working on it." But I felt like they were
6 ignored.

7 Q. Did you feel as though in your
8 role operator in charge, you could have stopped
9 the water treatment plant from going operational
10 on April 24?

11 MR. KIM: Objection as to form.

12 A. No, I did not.

13 Q. And was that due to politics or a
14 situation unique to Flint, or did you not
15 believe that was your -- that was a role that an
16 operator in charge had under the Safe Drinking
17 Water Act?

18 MR. MARKER: Objection; form,
19 foundation.

20 A. I'm going to say in my eyes, it
21 was more of a -- well, I don't want to say
22 political.

23 I don't believe that I had the
24 power in the Safe Drinking Water Act to do that.

1 But I would just reiterate what was told to me
2 from my supervisors, Mr. Johnson, Mr. Croft, and
3 I'm going to specifically say Mr. Croft, says,
4 "We have approval from the DEQ. This is going
5 to happen."

6 Q. And regardless of your concerns at
7 all times, the Flint water treatment plant met
8 those staffing requirements under the Safe
9 Drinking Water Act, correct?

10 A. Yes. To the best of my knowledge,
11 yes.

12 Q. And the MDEQ did not set April 24
13 as a date on which the switch needed to occur;
14 is that correct --

15 MR. MARKER: Objection; lack of
16 foundation.

17 Q. -- is that correct?

18 A. Yeah. I don't believe they had
19 any -- yeah, any input into what date the switch
20 was going to occur.

21 Q. Didn't you review or discuss your
22 e-mail that is Exhibit 24 with any of the other
23 employees at the Flint water treatment plant
24 prior to sending it?

1 A. I did not discuss it prior to
2 sending it. No. After I sent it, I talked with
3 a couple of my employees to let them know that I
4 had sent an e-mail.

5 Q. Okay. Who did you discuss it with
6 after you sent it?

7 A. After I sent it -- well, first --
8 I just can't remember -- well, I can't remember
9 the first person I talked to, but I know I
10 informed Mr. Wright that I had sent the letter.
11 And I had also informed one of my operator
12 foremen, Matthew McFarland, that I had sent the
13 letter.

14 Q. Did you -- to the best of your
15 knowledge, did either of them reach out to the
16 DEQ in any way to also discuss staffing
17 concerns?

18 A. Not that I'm aware of.

19 Q. Did you ever consider just
20 directly contacting the MDEQ and saying, "Can
21 you stop this water switch from happening?"

22 MR. MARKER: Form, foundation.

23 A. I never made that attempt, but I
24 will say in regards to, I guess, information

1 from the DEQ, I didn't feel any reluctance from
2 them or any worry from them in the switch.

3 Q. In your understanding, who was
4 responsible for making decisions regarding the
5 implementation of corrosion control at the Flint
6 water treatment plant at the time of the switch?

7 MR. KIM: Objection as to form.

8 A. I'm going to defer that to -- I
9 would say to the DEQ and the engineering firm
10 working for the city of Flint designing the
11 process and all the upgrades.

12 Q. Did you consider this part of your
13 role as the operator in charge, as part of your
14 responsibility for ensuring that the water was
15 treated properly?

16 MR. MARKER: Objection to form,
17 foundation.

18 MR. KIM: Objection as to form.

19 A. I'm going to say as operator in
20 charge, it is the responsibility to operate the
21 plant according to the Safe Drinking Water Act.

22 But in regards to the corrosion
23 control and adding new chemicals that we were
24 told we didn't need to design for, that in that

1 aspect, it wasn't my responsibility.

2 Q. You testified regarding your
3 understanding or assumption that the Flint River
4 water would be scale forming, correct?

5 A. Correct. Yes.

6 Q. Do you have an understanding of
7 the effect of orthophosphates on scale-forming
8 water?

9 A. I'm going to say no.

10 Q. Do you know if it has any effect
11 on scale-forming water?

12 MR. MARKER: Objection; form,
13 foundation.

14 A. Well, I will say you're adding
15 phosphate to create a scale-forming -- you know,
16 a phosphate coating on the pipes, so I
17 understand that there's some correlation to
18 forming a phosphate coating along with a
19 scale-forming, you know, hardness scale.

20 Q. Did you have discussions with the
21 MDEQ prior to the date and meeting in which you
22 were told that corrosion control would not be
23 required at the time of the switch? Did you
24 have discussions regarding corrosion control or

1 the Lead and Copper Rule with the MDEQ in, you
2 know, the time leading up to the switch?

3 A. Not that I recall, no.

4 Q. And did you -- in the meeting --
5 the meeting in which you were told that
6 corrosion control would not be required, that
7 was an in-person meeting, correct?

8 A. Correct. Yes.

9 Q. And who from the MDEQ was at that
10 meeting?

11 A. The one I remember is Mr. Prysby.

12 Q. And do you recall if Mr. Prysby
13 said that corrosion control was prohibited or
14 not required?

15 MR. MARKER: Objection; form.

16 A. In my conversation with
17 Mr. Prysby, I was already inquiring about our
18 possible monitoring schedule. So I asked, you
19 know, what's our frequency, how often are -- are
20 we going to be required to test for phosphate?

21 At that point, Mr. Prysby said,
22 "Well, we're not going to require you to add
23 phosphate, and we will -- in regards to the Lead
24 and Copper Rule, we will, you know, set up two

1 six-month rounds of sampling and then make a
2 determination."

3 Q. So the MDEQ did not prohibit the
4 use of corrosion control; is that correct?

5 MR. MARKER: Objection; form.

6 A. I won't say they prohibited it,
7 but in order to install or add that, we would
8 have had written -- we would have had to get
9 written approval from them.

10 Q. And by "written approval," do you
11 mean a permit to do the construction changes
12 necessary to allow for that -- the corrosion
13 control to be -- system to be constructed?

14 A. Yeah, I will say that, as well as
15 any change to a treatment process or a change in
16 treatment chemicals needs to be -- needs to have
17 written approval as well.

18 Q. And did you request -- make a
19 request for a permit application to create a
20 corrosion control system?

21 MR. MARKER: Objection; form.

22 A. Not until August or September of
23 2015, after we were required.

24 Q. And did you make a request for a

1 change in -- and I'm talking prior to the switch
2 now. Did you make a request for a change in
3 treatment and chemicals to allow for corrosion
4 control?

5 MR. MARKER: Objection; form.

6 A. No, we did not.

7 Q. Okay. And in order for the DEQ to
8 provide that written approval, something has to
9 be submitted from the plant to the DEQ, right?

10 A. Correct.

11 MR. MARKER: Objection; form.

12 Q. So they don't -- the DEQ doesn't
13 just create a written approval on their own?

14 A. Correct.

15 Q. Is it your understanding that as
16 the operator of the treatment plant, the city of
17 Flint can do things or ask to obtain approval to
18 do things that are greater than what are
19 required by the MDEQ?

20 A. I'll say yes.

21 Q. In his deposition, Mr. Wright
22 testified that he had been instructed to not do
23 anything beyond what was required by the MDEQ.

24 Did you receive similar

1 instructions?

2 MR. MARKER: Objection; form,
3 foundation.

4 A. I did not personally, no.

5 Q. Did you ever discuss the
6 instructions that Mr. Wright was given in that
7 respect with him?

8 A. I wouldn't say I discussed it with
9 him. He briefly discussed it with me.

10 Q. Okay. Do you know who that
11 instruction came from?

12 MR. KIM: Objection as to
13 foundation.

14 A. Yeah, I don't recall exactly where
15 that come from.

16 Q. After the water switch, the water
17 treatment plant started getting complaints
18 regarding the water; is that correct?

19 A. Yeah, fairly soon after. I'd say
20 within a month or two.

21 Q. And did you -- when these
22 complaints started coming in, did you have
23 contact with the MDEQ with respect to these
24 complaints?

1 A. Not that I recall. As time went
2 on, I'm sure I had conversations with them. But
3 right off the start, I don't believe so.

4 Q. And did the MDEQ contact you with
5 regards to complaints that were coming to the
6 MDEQ?

7 A. I believe the DEQ notified us. I
8 can't say it was myself. I don't know if they
9 were in contact with Mr. Wright. But as time
10 went on and as we get longer into the switch,
11 almost I'll say six month or longer after the
12 switch, I'm sure there was a few conversations
13 between myself and the DEQ in regards to
14 complaints.

15 Q. Would you ever tell a customer
16 that called to complain to contact the MDEQ?

17 A. No. I don't believe I ever have.

18 Q. As the operator in charge and
19 laboratory supervisor, you took responsibility
20 for obtaining the samples for the Lead and
21 Copper Rule monitoring; is that correct?

22 A. Correct.

23 Q. Did you review prior to -- let me
24 back up.

1 Did you have to take these types
2 of samples during the time that the water
3 treatment plant was a backup facility?

4 A. Yes, we did. We were under a
5 reduced monitor schedule for lead and copper, so
6 every three years, we were required to collect
7 30 samples.

8 Q. What year was the last year that
9 you did that sampling prior to the switch?

10 A. Oh, goodness. To be honest, I
11 can't recall. I'd have to -- yeah, I'd have to
12 see some old data.

13 Q. And with respect to those sampling
14 events, was the city of Flint within -- within
15 the standards set by the Safe Drinking Water Act
16 for lead and copper?

17 A. Prior to the switch, yes.

18 Q. Did you review the Safe Drinking
19 Water Act and its regulations prior to doing the
20 sampling required after the switch?

21 MR. MARKER: Objection to form.

22 A. I possibly could have, but I can't
23 recall.

24 Q. Is testing under the Lead and

1 Copper Rule part of what was tested to get your
2 F1 license? Is that part of the body of content
3 you were supposed to understand in order to
4 obtain your F1 license?

5 A. The F1 license, yeah, tests you
6 over a multiple of issues. And it's very
7 possible there was questions in regards to the
8 Lead and Copper Rule.

9 Q. Okay. And you've testified that
10 you didn't have the information available to you
11 to determine which residences had lead service
12 lines; is that correct?

13 A. That is correct.

14 Q. Okay. So when the MDEQ prior to
15 the switch says, "We're not going to require
16 corrosion control, instead we're going to do
17 these two six-month rounds of testings," did you
18 say to anyone at the MDEQ at that time, "We
19 really can't get reliable results from six-month
20 rounds of testing because I don't know where the
21 lead pipes are"?

22 MR. MARKER: Objection; form
23 foundation.

24 A. No, I did not.

1 Q. Did you ever bring that issue to
2 anyone directly at the MDEQ?

3 A. On a phone call with Mr. Prysby
4 around the time of the LeeAnne Walters' episode,
5 I discussed with Mr. Prysby that I was never --
6 no one had gone through the records and given me
7 a list of residences. I was just directed that
8 lead was everywhere.

9 Q. Okay. And that was in
10 approximately February 2015?

11 A. Yeah. Early '15, yeah.

12 Q. So two rounds were done, July 1,
13 2014 to December 31, 2014 and January 1, 2015 to
14 June 30, 2015; is that correct?

15 A. That is correct.

16 Q. Okay. And you testified yesterday
17 that someone at the DEQ told you to start in
18 July of 2014, not in April.

19 Do you recall who that was?

20 A. I don't recall who that was. That
21 would have shown on our yearly monitoring
22 schedule what dates to collect those samples.

23 Q. Okay. What was your process for
24 distributing the bottles and sampling

1 instructions? Did you go door to door? Did you
2 have, like, a service center where people could
3 come to get these bottles and sampling
4 instructions? How did that work?

5 A. It was a combination. I'll start
6 years back prior to the switch, I used to send
7 letters out asking for participants. A lot of
8 times you'd send out 100 letters, you might four
9 or five people to respond.

10 And it seemed like our next
11 monitoring year, I tried to utilize the same
12 people I had before. But then I would just use
13 a citywide e-mail. A lot of employees for the
14 city lived in the city, so I knew I could count
15 on them to -- or almost strong arm them to get
16 samples for us in a sense. So I knew I could
17 hit my numbers, so to speak.

18 So probably prior to 2010, I
19 started using city employees and kind of
20 continued that as time went on even up to the
21 switch.

22 The biggest problem with after the
23 switch is our number of samples required
24 increased from 30 to 100. So that provided a

1 little more difficulty, and can lead me back to
2 another e-mail in one of our exhibits where I
3 say I need more time to develop monitoring plans
4 and figure out where our information is.

5 Q. With respect to the letters or the
6 citywide e-mails, were those recipients targeted
7 in any way based on location or knowledge of
8 what type of service lines they had?

9 MR. MARKER: Objection; form,
10 foundation.

11 A. No. It was mainly just to try to
12 get some participants in the sampling.

13 Q. And when someone would respond
14 that they would be willing to participate, did
15 you do any analysis of their location or address
16 to see if you had any information on what type
17 of pipelines they would have?

18 MR. MARKER: Objection; form.

19 A. Yeah, I -- at the water plant and
20 under my job scope, I had no ability to observe
21 the records or even knew where the records were
22 kept.

23 Q. When people started calling in and
24 complaining about the water, did you ever

1 specifically ask those people to take water
2 samples for the purpose of the Lead and Copper
3 Rule monitoring?

4 A. Ms. LeeAnne Walters was the first.
5 After responding to her original complaint of
6 discolored water and coming back a week after
7 and had the same issue, we just happened to be
8 in our second round of sampling. So I asked
9 Ms. Walters.

10 And kind of from then on, I
11 would -- any individual that had an issue
12 similar to Ms. Walters, I would ask if they
13 would be part of our lead and copper sampling.

14 - - -

15 (Glasgow Deposition Exhibit 39 marked.)

16 - - -

17 BY MS. JACKSON:

18 Q. I'm going to hand you a few
19 exhibits. Okay. I just wanted to -- the first
20 exhibit is COF_FED_0107399. And this is the
21 July 2014 to December 2014 lead and copper
22 report; is that correct?

23 A. That is correct.

24 Q. Okay. And you prepared this,

1 correct?

2 A. Correct.

3 Q. And you have testified to this
4 before, that under number 9 on the first page,
5 you stated that not all samples were Tier 1
6 sites; is that correct?

7 A. That is correct.

8 Q. But then you've stated that they
9 all had lead service lines, correct?

10 MR. MARKER: Objection to form and
11 foundation.

12 Q. On the next pages.

13 A. Correct. Yes.

14 Q. Is there a reason that a site
15 could be -- have a lead service line but still
16 not be a Tier 1 site?

17 A. Not to my knowledge, no.

18 Q. And did you provide any
19 information as to this discrepancy within the
20 comments sections provided on this form?

21 A. No, I did not.

22 - - -

23 (Glasgow Deposition Exhibit 40 marked.)

24 - - -

1 BY MS. JACKSON:

2 Q. And then Exhibit 40 is
3 COF_FED_0073495. And this is the second
4 six-month round, January to June of 2015 report,
5 correct?

6 A. Correct.

7 Q. Okay. And again, you stated that
8 they're not all Tier 1 sites under number 9,
9 correct?

10 A. Correct.

11 Q. And yet stated they all had lead
12 service lines on the following pages, correct?

13 MR. MARKER: Objection; form,
14 foundation.

15 A. Correct.

16 Q. Okay. And did you provide
17 anything within the comments to discuss this
18 discrepancy?

19 A. I did not.

20 Q. And did anyone from the DEQ
21 contact you with respect to this, the
22 discrepancy between the certification that they
23 all had lead service lines but the statement
24 that there were not Tier 1 sites?

1 A. I believe Mr. Prysby and myself
2 discussed that in a phone call early February of
3 2015. So it would have been prior to the second
4 six-month round and after the first six-month
5 round.

6 - - -

7 (Glasgow Deposition Exhibit 41 marked.)

8 - - -

9 BY MS. JACKSON:

10 Q. Can you look at Exhibit 41,
11 please. This is 4-15-2016 SOM0020708.

12 MR. KIM: Could you repeat that
13 number again, please.

14 MS. JACKSON: 0020708.

15 BY MS. JACKSON:

16 Q. Do you recall this correspondence,
17 Mr. Glasgow?

18 A. Yes.

19 Q. Okay. And is this where Mr. --
20 your discussion with Mr. Prysby regarding where
21 this discrepancy occurred?

22 MR. MARKER: Objection; form,
23 foundation.

24 A. I'm going to say originally in a

1 phone call, like I said, not long after
2 Mr. Walters I think was the first conversation I
3 had in regards to this with Mr. Prysby.

4 Q. Okay. On the second page,
5 Mr. Prysby states under paragraph number 2, "The
6 lead and copper reporting form from July 2014 to
7 December 2014 monitoring period states that not
8 all sites were Tier 1. However, the listing of
9 all 100 locations on the subsequent pages show
10 all locations being Tier 1. Please clarify."

11 Is that correct?

12 A. Yes.

13 Q. Okay. And then your response is
14 on the first page. You respond to number 2
15 saying, "There were a couple of apartment
16 residences that were used in the first sampling
17 pool. These would be Tier 2 sites. The
18 majority were Tier 1."

19 Is that -- did I read that
20 correctly?

21 A. Yes.

22 Q. So is this your explanation for
23 why that discrepancy occurred?

24 MR. MARKER: Objection; form,

1 foundation.

2 A. I don't believe that is my full
3 explanation. Like I said, I recall a phone call
4 with Mr. Prysby discussing it more in depth.

5 Q. Okay. Would apartment residences
6 not qualify as Tier 1 sites?

7 A. Most likely not because it's
8 supposed to be single-family residences
9 according to the rule.

10 Q. I'm running out of time. So I'm
11 going to jump ahead a little bit.

12 You talked a little bit yesterday
13 about the removal -- your discussions with
14 Mr. Busch and Mr. Prysby in which you were --
15 discussed removing two of the sites from the
16 second round of testing.

17 A. Correct. Yes.

18 Q. And that was Ms. Walters' home,
19 correct?

20 A. Correct.

21 Q. And then also a business, correct?

22 A. Correct.

23 Q. And do you agree that both of
24 those samples do not meet the requirements under

1 the Lead and Copper Rule in order to be included
2 as Tier 1 sites?

3 MR. MARKER: Objection; form,
4 foundation.

5 A. From my understanding, I'll say
6 yes.

7 Q. Okay. And do you recall that you
8 had actually removed a few sites prior to
9 submitting the report that you had determined
10 did not meet the requirements?

11 MR. MARKER: Objection; form,
12 foundation, and contrary to his prior
13 testimony.

14 A. I do not recall.

15 Q. And how would -- do you know how
16 the inclusion of Ms. Walters' home in the second
17 round of sampling would have changed the
18 results?

19 MR. MARKER: Objection; form,
20 foundation, asked and answered.

21 A. I will say I -- I understand how
22 it would have an effect on the overall 90th
23 percentile.

24 Q. You do have an understanding of

1 that? I'm sorry. I just didn't understand you.

2 A. Yes, I will say I do have an
3 understanding. Yes.

4 Q. Okay. And what would that -- what
5 would the effect on the 90th percentile have
6 been?

7 MR. MARKER: Objection; form,
8 foundation, asked and answered.

9 A. In my mind, it would lower the
10 90th percentile value that we would report.

11 Q. And would it have put the city
12 over the action level?

13 MR. MARKER: Objection; form,
14 foundation.

15 A. Without sitting here and going
16 through the data, I can't -- I can't answer that
17 here. I never calculated it out exactly.

18 Q. With respect to Legionella, did
19 you ever ask the MDEQ for assistance in
20 responding to questions regarding Legionella and
21 the Flint water treatment plant?

22 A. Not that I'm aware of, no.

23 Q. With respect to the boil water
24 advisories that were issued after the switch,

1 did you coordinate with the MDEQ in issuing
2 those boil water advisories?

3 A. Yes.

4 Q. And did you feel that you got the
5 information you needed and the support that you
6 needed from the MDEQ with respect to the boil
7 water advisories?

8 A. Yes.

9 Q. Okay. And with regard to the TTHM
10 issue, did you coordinate or seek support from
11 the MDEQ with respect to TTHM issues after the
12 water switch?

13 A. Yes. As time went on and we
14 realized we were, yep, going to have an issue, I
15 remember conversations with Mr. Prysby.

16 Q. Okay. And did you feel that you
17 got the support and advice that you needed to
18 respond to the TTHM issues from the MDEQ?

19 MR. MARKER: Objection; form,
20 foundation.

21 A. I'll say yes.

22 Q. Okay. Were you involved in the
23 decision to switch back to Detroit water --

24 MR. KIM: Objection as to form.

1 Q. -- in late 2015?

2 MR. KIM: Objection as to form.

3 A. I will say I was asked my opinion
4 on the subject.

5 Q. And what was your opinion?

6 A. My opinion was to switch back.

7 MS. JACKSON: Okay. I'm going to
8 reserve the rest of my time.

9 Go off the record.

10 THE VIDEOGRAPHER: We are going
11 off the record at 11:26 a.m.

12 (Recess taken.)

13 THE VIDEOGRAPHER: We are back on
14 the record at 11:37 a.m.

15 - - -

16 EXAMINATION

17 BY MR. KUHL:

18 Q. Good morning, Mr. Glasgow. My
19 name is Richard Kuhl. I'm Assistant Attorney
20 General with the State of Michigan. I represent
21 the people of the State of Michigan in this
22 litigation.

23 Now, as part of your
24 responsibilities as the operator in charge, you

1 oversaw the monitoring that was conducted at the
2 Flint water treatment plant, correct?

3 A. Correct.

4 Q. And that monitoring was conducted
5 on a daily basis, wasn't it?

6 A. Yes. The majority of it, yes.

7 Q. Where did you test the water at
8 the Flint water treatment plant?

9 A. Most of the time it was from -- a
10 plant tap is what we referred to it as. It was
11 a faucet tap right in the laboratory.

12 Q. And would that tap represent the
13 water that was treated by the treatment plant
14 prior to it being sent into the distribution
15 system?

16 A. Correct. Yes.

17 Q. And would you use those monitoring
18 results to prepare a monthly report for the
19 state of Michigan?

20 A. Yes.

21 Q. And you would submit those
22 reports?

23 A. Yes.

24 Q. And who prepared those reports?

1 A. Myself.

2 - - -

3 (Glasgow Deposition Exhibit
4 43 through 59 marked.)

5 BY MR. KUHL:

6 Q. I've had marked as Exhibits 43
7 through 49 the monthly operating reports
8 submitted by the city to DEQ for the April 2014
9 through August 2015 time period.

10 Can I ask you to take a look at
11 those, sir.

12 A. Sure.

13 MS. JACKSON: What was that time
14 frame again?

15 MR. KUHL: April 2014 through
16 August 2015.

17 MS. JACKSON: Thank you.

18 A. So the report would actually be
19 dated May. So the date of April is due the
20 following month in May, so just to clarify. So
21 it will run from May until --

22 MS. SMITH: I'm sorry. For the
23 record could you clarify your last
24 comment that the report dated August

1 would reflect --

2 THE WITNESS: Yes. I'm sorry.

3 The report -- you wanted to start with
4 reports from April of 2014, but that
5 report is not due until May. So it will
6 show we're always a month behind on
7 reports in that aspect. So the report
8 for April of 2014 would be due before
9 May 10th of 2014.

10 MS. SMITH: So if the report is
11 dated August 2015, it would reflect the
12 data from the prior month?

13 THE WITNESS: Correct.

14 MS. SMITH: Thank you.

15 MR. KUHL: Why don't we go off the
16 record while Mr. Glasgow is looking at
17 these.

18 THE VIDEOGRAPHER: We're going off
19 the record at 11:41 a.m.

20 (Pause in proceedings.)

21 THE VIDEOGRAPHER: We're back on
22 the record at 11:47 a.m.

23 - - -

24

1 BY MR. KUHL:

2 Q. Mr. Glasgow, I'm going to hand
3 you -- or ask you first to look at Exhibit 43.

4 MR. KUHL: And to clarify for the
5 record, I've handed him Exhibits 43 to
6 59.

7 BY MR. KUHL:

8 Q. Now, this was an e-mail that you
9 sent on May 14, 2014 to Mr. Rosenthal, correct?

10 A. Correct.

11 Q. And did this include a partial
12 monthly operating report for the April 2014 time
13 frame?

14 A. Yes, it did.

15 Q. And it's a truncated report
16 because the plant didn't operate for the entire
17 month of April; is that correct?

18 A. Correct.

19 Q. Are the rest of the reports that
20 we have marked as exhibits complete copies of
21 the monthly reports that you submitted to DEQ?

22 A. Yes, it appears so. Yes.

23 Q. And each of them was signed by you
24 as the operator in charge of the Flint water

1 treatment plant; is that correct?

2 A. That is correct.

3 Q. Do you have any reason to believe
4 that the information that you reported in the
5 monthly operating reports was incorrect?

6 A. Not to my knowledge, no.

7 Q. Do you know, were these reports
8 made available to the public?

9 A. Not that I'm aware of.

10 Q. Do you know if they were posted on
11 any of the city of Flint websites?

12 A. I do not recall if they were.

13 Q. I know prior to the switch, you
14 had expressed some concerns about the ability to
15 complete the monitoring that was required.

16 Is there anything in these reports
17 that indicated to you that the city failed to
18 comply with all monitoring requirements on the
19 Safe Drinking Water Act?

20 A. Not to my knowledge, no.

21 Q. Did the city receive a violation
22 during the switch for failing to conduct
23 monitoring?

24 A. Not to my recollection, no.

1 Q. And looking at these reports,
2 isn't it correct that Flint reported to the MDEQ
3 for the April 2014 through August 2015 time
4 frame that Flint River water was treated to meet
5 all applicable Safe Drinking Water Act
6 standards?

7 MR. MARKER: Objection; form,
8 foundation.

9 MS. SMITH: Objection.

10 A. I will say yes.

11 Q. At any time between April 2014 and
12 September 2015, did you tell anybody at MDEQ
13 that Flint was unable to treat the Flint River
14 water such that it could not meet all applicable
15 Safe Drinking Water Act standards?

16 MR. MARKER: Objection; form.

17 A. No. Not to my knowledge, no.

18 Q. At any time between April 2014 and
19 September 1, 2015, did you believe that the
20 drinking water being produced by the Flint water
21 treatment plant created a substantial risk to
22 the health of the residents of the city of
23 Flint?

24 MR. KIM: Objection as to form and

1 foundation.

2 MR. CAMPBELL: Object to the form
3 of that as well.

4 MS. SMITH: Join. Are we
5 following the one for all?

6 MR. KIM: Yes.

7 A. Yeah. Could you restate that
8 question for me? I'm sorry.

9 MR. KUHL: Could you read it back,
10 please.

11 (Record read back as follows:

12 "Question: At any time between
13 April 2014 and September 1, 2015, did
14 you believe that the drinking water
15 being produced by the Flint water
16 treatment plant created a substantial
17 risk to the health of the residents of
18 the city of Flint?")

19 MR. CAMPBELL: Object to the form.
20 When are you talking about?

21 A. I'm going to say no.

22 Q. Did you at any time between
23 April 2014 and September 1, 2015 tell anybody at
24 MDEQ that the drinking water being produced by

1 the Flint water treatment plant was creating a
2 substantial risk to the public health in Flint?

3 MR. MARKER: Objection; form.

4 MR. CAMPBELL: Objection.

5 A. No, I did not.

6 Q. Now, it's correct after the switch
7 in April 2014 that the city received a fair
8 number of complaints about the drinking water;
9 isn't that correct?

10 A. That is correct. Yes.

11 Q. And some of those residents
12 expressed a belief that the drinking water was
13 responsible for rashes, hair loss, or other
14 physical ailments, correct?

15 A. Correct. Yes.

16 Q. Did you at any time come to the
17 conclusion between April 2014 and September 1,
18 2015 that the drinking water was responsible for
19 those complaints?

20 MR. MARKER: Objection; form.

21 A. I did not, no.

22 Q. Now, when you got these complaints
23 in, did the city have a process or procedure for
24 responding to these complaints?

1 A. We had an internal procedure, I
2 guess, at the Flint water plant. If the
3 complaints made it to us, I would try to
4 schedule myself or one of my staff to, you know,
5 go and contact the resident, pull water samples
6 from their house, and have discussions with
7 them.

8 Q. Do you have any idea of how many
9 times you would do that a month between
10 April 2014 and September 1, 2015? Just a rough
11 estimate.

12 A. I would say probably anywhere
13 between 10 to 20 a month. But it really didn't
14 seem to start for a couple months after the
15 switch. So I would say more towards summer of
16 '14.

17 Q. Besides going to the houses and
18 sampling, did you respond to the complaints in
19 any other fashion?

20 A. Not that I'm aware of, no.

21 Q. Would the city flush hydrants?

22 A. If we determined -- if we read a
23 complaint and it was a discolored water,
24 something we had seen prior to the switch as

1 well, I would make a call to our water service
2 center which worked on the distribution system.
3 And at times they would -- they would flush
4 hydrants accordingly to try to see if it was
5 just, you know, discolored water in a small area
6 that we could flush out of the system.

7 Q. Can you think of any other things
8 that the city attempted to do during the switch
9 to try to resolve the complaints?

10 A. Possibly increase chlorine dosage.
11 Sometimes taste and odors can be an issue. A
12 little chlorine -- sometimes, you know, we might
13 try to boost our chlorine input into the water.

14 Q. Did you change the treatment at
15 all to try to change the quality of the water?

16 A. Not significantly, no.

17 Q. Let me ask you: Isn't it correct
18 that you told the FBI in March of 2016 that you
19 believed when the switch was made, that the
20 water treatment plant would be able to treat the
21 water such that it met the Safe Drinking Water
22 Act standards?

23 A. Yes.

24 Q. I think you've testified several

1 times about some of the test runs that took
2 place prior to the switch.

3 Do you recall that?

4 A. Yes.

5 Q. Did you test the water during
6 those runs?

7 A. Yes, we did.

8 Q. Did those tests indicate that the
9 water being produced during the test run was
10 meeting the Safe Drinking Water Act standards?

11 A. Yes. To the best of my knowledge.
12 Yes.

13 Q. I'm going to ask you to pull
14 out -- it's been marked twice -- Exhibit 7 or
15 Exhibit 25, whichever is easiest. It's the
16 October 31, 2013 e-mail.

17 MR. MARKER: For the record, we've
18 got 7 in front of him.

19 MR. KUHL: Okay.

20 BY MR. KUHL:

21 Q. All right. Now, this was an
22 e-mail that you sent to Duffy Johnson on
23 October 31, correct?

24 A. Correct.

1 Q. You had gotten a message from
2 Mr. Johnson asking about the potential effect of
3 the treated Flint River water on the
4 distribution system, correct?

5 A. Correct.

6 Q. And this was prior to the switch,
7 right?

8 A. Yes.

9 Q. Do you recall specifically what
10 Mr. Johnson asked you?

11 A. I don't recall specifically. I
12 imagine it was in regards to kind of what the
13 different characteristics of the water would be
14 after the switch as compared to prior to the
15 switch.

16 Q. All right. And your response was
17 that you believed it was most likely you'll have
18 a scale-forming water, right?

19 A. Correct. Yes.

20 Q. What is scale-forming water?

21 A. Basically water with a particulate
22 calcium in there that will settle out and kind
23 of form a scale on the pipes.

24 Q. And the scale on the pipes will

1 reduce the leaching of metals into the drinking
2 water, right?

3 A. It could possibly have that
4 effect. In regards to this e-mail, the fact of
5 leaching from the pipes into the water wasn't
6 really what I was getting at.

7 Q. But that's a correct statement,
8 right?

9 A. Correct. Yes.

10 Q. And so you believed at the time
11 you wrote this e-mail that the most likely
12 result would be that the treated drinking water
13 would produce scale to limit leaching of metals
14 from the pipes into the drinking water?

15 A. As I stated, I didn't -- I didn't
16 write this e-mail in regards to leaching of
17 metals into pipes. It was really in regards to
18 the softening process and whether it would be
19 scale forming. So I guess you could make
20 inferences from it. But originally --

21 Q. Sorry. I didn't mean to
22 interrupt. I apologize.

23 A. No. I was just going to say
24 originally when I'm looking at this e-mail and

1 the data, it's really in regards to how well our
2 softening process is going to work to me.

3 Q. But you knew at that time if you
4 had scale producing water, that it would have
5 limited the leaching of metals into the drinking
6 water, correct?

7 MR. MARKER: Objection to form.

8 A. I'll say correct, yes.

9 Q. Part of what you were planning to
10 do was to keep the pH, the alkalinity, and the
11 hardness of the treated water similar to what
12 the city had been receiving from Detroit,
13 correct?

14 A. Correct. Yes.

15 Q. Can you use pH, alkalinity and --
16 sorry. Let me start that over again.

17 Can you use pH and alkalinity as a
18 form of corrosion control?

19 MR. KIM: Objection as to form.

20 A. I will say in the effect of
21 causing a calcium scale, yes, you can.

22 Q. I think there was some testimony
23 yesterday about whether or not that you had done
24 anything prior to the switch to determine the

1 impact of the Flint River water on the
2 distribution system.

3 Do you recall that?

4 A. I do, yes.

5 Q. And I think -- at least my
6 recollection was you testified you didn't recall
7 doing anything.

8 Is that your recollection?

9 A. That is my recollection.

10 Q. But, in fact, in looking at this
11 e-mail, you were attempting, at least in part,
12 to determine how the treated water would impact
13 the distribution system, correct?

14 MR. MARKER: Objection; form.

15 A. No. Really, with this e-mail,
16 it's leading back to comparisons of finished
17 water between Detroit water that was purchased
18 and Flint River water that was treated.

19 I'm looking more at the
20 parameters, you know, what's your level of
21 hardness going to be, what level of calcium is
22 going to be in there, what's the pH. It was
23 really just a comparison in my eyes.

24 Q. All right. In that e-mail, you

1 stated, "At times the process will determine
2 what we can do."

3 Do you see that?

4 A. Yes.

5 Q. What do you mean by that?

6 A. I mean the lime softening process
7 is a very dynamic process. It changes, you
8 know, hourly, I'll say.

9 So depending on the
10 characteristics of the incoming untreated water
11 going into the softening process and the way the
12 operators at the water plant are adding lime or
13 how close they're watching it, the consistency
14 of the untreated water will kind of determine
15 how soft we can get it or what's actually going
16 to be the finished product, so to speak.

17 Q. Do you recall undertaking any
18 tests or running any models prior to the switch
19 to determine if the treated Flint River water
20 would be scale forming?

21 A. Other than just a test run with
22 softening to look at your numbers, and use a
23 number of a couple different parameters to
24 determine your Langelier index as just kind of a

1 scale-forming property of the water.

2 Q. Do you think you attempted to do
3 those calculations prior to the switch?

4 A. I would -- I would assume I did a
5 time or two based on our long test run in the
6 summer of '13 there.

7 Q. All right. So do you recall the
8 conclusions you reached based upon those test
9 results?

10 A. Well, it's kind of -- in here I
11 believe that our Langelier index was slightly
12 positive. Should have been a slightly
13 scale-forming finished water.

14 Q. After the switch, did you attempt
15 to use the Langelier index to calculate whether
16 or not the water would be scale forming?

17 A. Periodically. We had a lot of
18 data coming in hourly, so sometimes you'd take
19 averages of the day and just get a peek at what
20 it was for the day. And the index is something
21 that would also change very dynamic depending on
22 the results of the parameters.

23 Q. And that's what I'm trying to get
24 at is, how often would you run that test? Is

1 that something you did on a daily basis, weekly,
2 monthly?

3 Can you give me an idea?

4 A. I would say probably -- it would
5 probably depend on how the plant was running.
6 If things were going okay and kind of staying
7 stable for a few days in a row, you wouldn't
8 necessarily run the test, because things were
9 kind of stabilized, so to speak.

10 Once any changes happened, it
11 would be nice to run a calculation. I can't
12 tell you the number of times I did. And most of
13 the time if I did, it was on little -- a little
14 scratch pad, you know, just to -- just to take a
15 look.

16 Q. Would it at least be weekly?

17 A. Possibly.

18 MR. KUHL: Can I have that marked
19 as Exhibit 60.

20 - - -

21 (Glasgow Deposition Exhibit 60 marked.)

22 - - -

23 MR. KUHL: For the record, I've
24 handed you an exhibit with the Bates

1 number COF_FED_0033610 through 611.

2 BY MR. KUHL:

3 Q. Do you recognize this document,
4 Mr. Glasgow?

5 A. It does appear to be an e-mail
6 from myself to Mr. Daugherty Johnson.

7 Q. And this was sent on November 18,
8 2014, right?

9 A. Yes. Correct.

10 Q. So that's after the water switch,
11 correct?

12 A. Correct.

13 Q. And in this e-mail, you state,
14 "Our treatment process results in the water
15 being mildly scale forming, so it should not
16 lead to any corrosion of the distribution pipes
17 in household plumbing."

18 Did I read that correctly?

19 A. Yes.

20 Q. Where did you get the term "mildly
21 scale forming"?

22 A. It's based off the results of the
23 Langelier index.

24 Q. So is it correct that at least as

1 of November 18, 2014 that you believed the water
2 being produced at the Flint water treatment
3 plant would be mildly scale producing?

4 A. Yes.

5 MR. KIM: What's that Bates number
6 again, Richard? Sorry.

7 MR. KUHL: All right. I am taking
8 a minute from Bill. COF_FED 0033610
9 through 611.

10 MR. KIM: Thank you.

11 BY MR. KUHL:

12 Q. Now, in this e-mail, you indicate
13 that Detroit water was mildly corrosive.

14 Did you see that?

15 A. Yes.

16 Q. Why did you believe that?

17 A. Most likely, I used some of
18 Detroit's results to calculate a Langelier
19 index.

20 Q. It's correct, isn't it, that you
21 told -- well, let me start that again. It's
22 correct that you believed prior to the switch,
23 that the water would be scale producing, right?

24 A. Yep, under the -- yeah. Under the

1 correct conditions in the plant, it could be
2 scale forming.

3 Q. And so at that time, you didn't
4 believe it was going to be necessary to add
5 orthophosphates to the water; isn't that
6 correct?

7 MR. MARKER: Objection; form,
8 foundation.

9 A. I can't say that I was thinking
10 about the addition of a phosphate at that time.

11 Q. Let me ask you, Mr. Glasgow, to
12 look at -- I think it's Exhibit 1, is your
13 testimony at the preliminary exam. And
14 specifically ask you to look at the testimony
15 from April 16, 2018. And I'll direct you to
16 page 51 of that testimony.

17 MR. MARKER: Did you say 51?

18 MR. KUHL: Yes, sir.

19 BY MR. KUHL:

20 Q. And specifically, sir, I'll refer
21 you to -- they're numbered -- the lines are
22 numbered on the left-hand side -- lines 11
23 through 23.

24 A. Okay.

1 Q. All right. So you testified at
2 the preliminary exam, sir, that you didn't think
3 the water was going to be corrosive, and,
4 therefore, it wouldn't need phosphates; isn't
5 that correct?

6 MR. MARKER: Objection; form.

7 A. That is in my testimony.

8 Q. And that was the truth at the
9 time, correct, Mr. Glasgow?

10 MR. MORRISSEY: Objection.

11 A. Correct.

12 Q. Can I ask you to pull out
13 Exhibit 10.

14 Do you recognize this e-mail,
15 Mr. Glasgow?

16 A. I do, yes.

17 Q. And it's dated February 24, 2015?

18 A. Correct.

19 Q. Now, Mr. Bincsik says that Marvin
20 from Veolia told you that -- or told him that
21 Flint should add phosphate to the water to
22 prevent corrosion, correct?

23 A. Yes. According to this e-mail,
24 yes.

1 Q. And you didn't believe that was
2 necessary, right?

3 MR. MARKER: I'll object to form.
4 Answer if you can.

5 A. I will say -- I will say yes.

6 Q. And that's because your tests were
7 still showing that the water was scale
8 producing, right?

9 A. Yeah. To the best of my
10 knowledge, yes.

11 Q. Did you continue to run these
12 tests after February 24, 2015?

13 A. I do not recall.

14 Q. But it was your practice to do it
15 weekly or monthly, wasn't it?

16 A. It was kind of a standard. Right
17 around 2015 is when I took a promotion to
18 utilities supervisor. We're getting close to
19 that time frame. So I can't -- my time in the
20 lab was limited after that.

21 Q. Well, is it your recollection that
22 you didn't attempt to calculate the Langelier
23 index after your promotion?

24 A. I'm just saying I don't recall.

1 Like I said, I didn't have a set time frame of
2 when we did it. As we get into '15, there was a
3 lot of issues going on. So I don't recall, like
4 I said, the frequency or how often I did it at
5 that time.

6 Q. And that's fine. My question was,
7 did you attempt to -- do you recall attempting
8 to calculate the Langelier index after
9 February 24, 2015?

10 A. I can't recall.

11 Q. Do you believe that you would
12 have?

13 A. I would think.

14 MR. KIM: Objection as to form.

15 A. I would think I would have.

16 Q. Was there anybody else at the
17 water treatment plant that could run that
18 calculation?

19 A. Yes, there have been a few other
20 individuals that could have run it.

21 Q. Did you ever ask them to do it?

22 A. It wasn't part of our -- I will
23 say it wasn't part of our daily standard
24 operating procedures.

1 Q. Well, let me ask you, sir, prior
2 to September 1, 2015, do you ever recall running
3 the Langelier index and having the result come
4 back indicating that the treated water would not
5 be scale producing?

6 MR. MARKER: Objection as to form.

7 A. As I said, that's a very dynamic
8 process, so there's probably times for certain
9 portions of the day where it could have been a
10 negative number.

11 Q. And that's fine. My recollection
12 [sic] is do you recall that happening?

13 A. I can't picture an instance. But,
14 like I said, it wouldn't -- that number changed
15 dramatically, you know, day to day, hour to
16 hour. So it's possible there could have been
17 times where there was a negative number, other
18 times positive.

19 Q. And that's fine. But I'm just
20 asking if you recall there being a negative
21 number coming back specifically.

22 A. I don't specifically remember.

23 Q. All right. I apologize for
24 jumping around. We took a lot of questions, so

1 I'm trying not to repeat. So I'm going to jump
2 topics here.

3 I think you've already testified
4 you know, who Lockwood, Andrews & Newnam is,
5 correct?

6 A. Correct.

7 Q. In your responsibilities as the
8 operator in charge, did you rely on advice that
9 you received from them?

10 A. Yes.

11 MR. GAMBLE: Objection; form.

12 Q. Did you have any set meetings
13 with -- I'm going to call them LAN; is that all
14 right?

15 A. Yep. That's fine.

16 Q. Did you have any set meetings with
17 them?

18 A. Yeah. I'm going to -- I'm going
19 to say yes. Like I said, they were around
20 during some upgrades and also around a while
21 after we started running the plant from the
22 Flint River.

23 Q. Did they have office space in the
24 water treatment plant?

1 A. No, they did not have office
2 space.

3 - - -

4 (Glasgow Deposition Exhibit 61 marked.)

5 - - -

6 MR. CAMPBELL: What's the number,
7 please?

8 MR. KUHL: Exhibit 61. It's got a
9 Bates range of COF_FED_0113932 through
10 34.

11 BY MR. KUHL:

12 Q. This is a September 10, 2014
13 letter from Mr. Prysby to Mr. Wright, correct?

14 A. Correct.

15 Q. And this is a compliance
16 communication about the total trihalomethanes?

17 A. Correct.

18 Q. And in this letter, Mr. Prysby
19 asked the city to prepare an operational
20 evaluation, correct?

21 A. Correct.

22 Q. Did you ever see this letter, sir?

23 A. I did, yes.

24 Q. Do you know, did the city perform

1 the operational evaluation?

2 A. To my knowledge, I thought we
3 contracted LAN to do that for us.

4 Q. On the second page of this letter,
5 right in the middle under "Examination of
6 Treatment Operational Practices," do you see
7 that Mr. Prysby asked the report to address the
8 treatment problems that contribute to TTHM
9 formation?

10 A. Yes.

11 Q. And would LAN have been
12 responsible for preparing the report on that
13 issue?

14 MR. GAMBLE: Objection; form,
15 foundation.

16 A. To the best of my knowledge, I
17 would say yes.

18 Q. Under that, it states, "The report
19 shall also include steps the city should
20 consider to minimize future exceedances."

21 Do you see that?

22 A. Yes.

23 Q. And was LAN tasked with
24 identifying those steps?

1 MR. GAMBLE: Objection; form,
2 foundation.

3 A. To the best of my knowledge, like
4 I said, I thought they were contracted to
5 develop the OEL, the evaluation. So I'll say,
6 yeah, to the best of my knowledge.

7 Q. And then that report was supposed
8 to be submitted to DEQ, correct?

9 A. Correct.

10 - - -

11 (Glasgow Deposition Exhibit 62 marked.)

12 - - -

13 MR. KUHL: We're on Exhibit 62,
14 which is the draft November 2014 OEL,
15 operational evaluation report, prepared
16 by LAN. It has a Bates range
17 COF_FED_0028870 through 889.

18 MR. GAMBLE: Richard, what's the
19 date on that?

20 MR. KUHL: November 2014.

21 BY MR. KUHL:

22 Q. Do you recognize this document,
23 Mr. Glasgow?

24 A. I do, yes.

1 Q. And this was a draft prepared by
2 LAN?

3 A. Yes.

4 Q. And it identified the responsible
5 causes for the TTHM exceedances, correct?

6 MR. GAMBLE: Objection; form.

7 A. Correct.

8 Q. And it sets out an action plan for
9 the city, right?

10 A. Yes.

11 Q. Let me ask you to turn to page 2
12 of that report. About a third of the way down
13 under "Immediate" -- well, let me start that
14 again.

15 Do you see "Immediate Actions"
16 that are listed on page 2?

17 A. Yes.

18 Q. And then under the bullet point,
19 "WTP operational changes."

20 Do you see where that section is?

21 A. Yes.

22 Q. And then the first immediate
23 action that LAN identifies is "Discontinue
24 softening bypass stream to reduce chlorine

1 demand."

2 Do you see that?

3 A. Yes.

4 Q. What did they mean by that --

5 MR. GAMBLE: Objection; form,
6 foundation.

7 Q. -- to your knowledge?

8 A. The way the water plant was set
9 up, it could almost be operated as two separate
10 plants. So we could go through a couple of our
11 treatment processes before softening. And then
12 when we got to softening, we could bypass some
13 of the water around softening and only soften a
14 partial amount of the water, so to speak. And
15 then after the softening process, combine the
16 water back together to go through the last steps
17 of the process.

18 - - -

19 (Glasgow Deposition Exhibit 63 marked.)

20 - - -

21 BY MR. KUHL:

22 Q. Mr. Glasgow, I'm going to hand you
23 a table that we've prepared that summarizes the
24 monthly operating reports in an attempt to move

1 this process along at a little speedier rate.

2 I've handed copies to others.

3 As I indicated, this data is taken
4 from the monthly operating reports. I tried to
5 input it accurately, but if you have any
6 questions, feel free to look at the actual
7 monthly operating reports.

8 MR. MARKER: I object to the
9 extent that you just mentioned if there
10 is an inaccuracy. I guess I'll object
11 to that.

12 Q. Now, in November -- and you can
13 look at the November monthly operating report --
14 the average lime dosage was 125.1, correct?

15 A. Yes. According to this chart,
16 yeah.

17 Q. And then it's still -- it was
18 123.3 in December, right?

19 A. Yes.

20 Q. Then it went up to 153.4 in
21 January?

22 A. Uh-huh.

23 Q. And 167.6 in February.

24 Do you see that?

1 A. Yes.

2 Q. Is that because the city was
3 adding more lime to the water?

4 A. Yeah. We're obviously adding more
5 lime with the dosage increasing. Without going
6 through the reports, it's hard to say why.

7 Q. Well, is it your recollection that
8 the city implemented LAN's proposal to
9 discontinue the softening and bypass during that
10 time frame?

11 MR. GAMBLE: Objection; form,
12 foundation.

13 A. I'm going to have to say possibly.
14 Just an increase in lime dosage doesn't --
15 doesn't really refresh my memory for sure if we
16 stopped the bypass, but possibly. It could have
17 been based on their recommendations.

18 Q. You would certainly agree that the
19 numbers January, February, April, May, June,
20 July were higher than the prior period --

21 A. Correct.

22 Q. -- correct?

23 A. Correct. Yes.

24 Q. Lime has an effect on the

1 alkalinity of the produced water; is that
2 correct?

3 A. That is correct.

4 Q. Generally the more lime added, the
5 lower the alkalinity?

6 A. Correct. Yes.

7 Q. You would also agree that the
8 general downward trend in the alkalinity of the
9 treated water from November of '14 -- let me
10 start that again. I didn't think that worked at
11 all.

12 You would agree that there was a
13 general downward trend in the alkalinity of the
14 treated water from November 2014 to
15 September 2015?

16 A. Yes, I would say that's a general
17 trend.

18 Q. Can I ask you to turn to page 4 of
19 the LAN report. About -- sorry.

20 A. I've got it. We're there now.

21 Q. About two-thirds of the way down,
22 just above Table 2, it refers to a 2002 report
23 by Alvord, Burdick & Howson.

24 Do you see that?

1 A. Yes.

2 Q. Have you seen that report?

3 A. I have not.

4 Q. According to Table 2, that 2002
5 study recommended that Flint add 40 micrograms
6 per liter of ferric chloride for coagulation.

7 Do you see that?

8 A. I do, yes.

9 Q. And on page 9, Table 5, it lists
10 the city of Flint's current usage of ferric
11 chloride, correct?

12 A. Correct.

13 Q. And it identifies the current
14 usage as only 7.7 micrograms per liter, correct?

15 A. Correct.

16 Q. And on top of page 10 of this
17 report from LAN, under the first paragraph, LAN
18 states that the differences between the current
19 usage and the treatability study was "an obvious
20 starting point for optimizing treatment to
21 prevent DBP limit exceedances."

22 Do you see that?

23 A. Yes.

24 Q. Was it your understanding that LAN

1 was proposing that Flint change its treatment to
2 meet the dosages set forth in the 2002 study?

3 MR. GAMBLE: Objection; form,
4 foundation.

5 A. I'm sorry. Could you restate
6 that?

7 Q. Sure.

8 MR. KUHL: Can you read it back.

9 (Record read back as follows:

10 "Question: Was your understanding that
11 LAN was proposing that Flint changed its
12 treatment to meet the dosages set forth
13 in the 2002 study?")

14 A. Yeah, I don't know if I would say
15 they were trying to change it back to the 2002
16 study. I guess I'm -- that statement to me just
17 shows that they took into account the study that
18 was done back in 2002.

19 Q. Well, they state, "an obvious
20 starting point for optimizing treatment" --
21 sorry.

22 They said the difference between
23 the current usage and the recommended was "an
24 obvious starting point," right?

1 A. Right.

2 Q. They recommended that you add
3 additional ferric chloride?

4 MR. GAMBLE: Objection; form,
5 foundation.

6 A. Correct. According to this, yes.

7 Q. And if you look at the November
8 monthly operating report, the average ferric
9 chloride dosage was, what, 9.6.

10 Do you see that?

11 A. Yes.

12 Q. And that it increased in December
13 to 14.9.

14 Do you see that?

15 A. I do, yes.

16 Q. And 16.8 in January?

17 A. Yes.

18 Q. 16.3 in February?

19 A. Yes.

20 Q. Would you agree that one of the
21 reasons that the dosage increased was the
22 recommendations provided by LAN?

23 MR. GAMBLE: Objection; form,
24 foundation.

1 A. I might want to have to say yes.

2 Q. I mean, that's what you retained
3 LAN for, to provide recommended actions,
4 correct?

5 MR. GAMBLE: Objection; form,
6 foundation.

7 A. Yeah.

8 Q. And they were paid a lot of money
9 to provide those recommendations, weren't they?

10 MR. GAMBLE: Objection; form,
11 foundation.

12 A. I'm unaware of what the cost was.

13 Q. Well, you're aware that LAN was
14 paid a lot of money by the city of Flint over
15 time, right?

16 MR. GAMBLE: Objection; form.

17 A. Yes.

18 Q. In looking through this draft
19 report, I didn't recall seeing anything about
20 adding corrosion control.

21 Do you recall any statements like
22 that?

23 A. I do not, no.

24 Q. I didn't see any analysis in this

1 report on the potential impact of changing the
2 water characterization would have on lead and
3 copper corrosion, did you?

4 MR. GAMBLE: Objection; form
5 foundation.

6 A. I did not, no.

7 Q. Do you recall Warren Green telling
8 the city that he didn't believe it would be
9 necessary to add orthophosphates to the water at
10 the time of the switch?

11 MR. GAMBLE: Objection; form,
12 foundation.

13 A. I do not recall.

14 Q. Do you recall Mr. Green telling
15 the city that he thought the treated Flint River
16 water would be scale producing?

17 MR. GAMBLE: Objection; form,
18 foundation.

19 A. I do not recall.

20 Q. Ferric chloride was used by the
21 city as a coagulant; is that correct?

22 A. That is correct. Yes.

23 Q. Why is it that Flint decided to
24 use ferric chloride as a coagulant; do you know?

1 A. Based on my knowledge, I'm not
2 sure when I first started working at the water
3 plant. That was a coagulant they had on hand.
4 So it was determined sometime, yeah, prior to
5 2005 when I started there.

6 Q. Were you aware that Detroit Water
7 and Sewage Department had used aluminum sulfate
8 as a coagulant?

9 A. Yes.

10 Q. Did your consultant, LAN, ever
11 advise you that a treatment change from a
12 sulfate-containing coagulant such as aluminum to
13 a chloride-containing coagulant such as ferric
14 chloride would increase the amount of lead
15 leaching into the drinking water?

16 MR. GAMBLE: Objection; form,
17 foundation.

18 A. Not that I recall.

19 MR. KUHL: Do you want to take a
20 lunch break here?

21 THE VIDEOGRAPHER: We are going
22 off the record at 12:31 p.m.

23 (Recess taken.)

24 - - -

1 Thereupon, at 12:31 p.m. a lunch
2 recess was taken until 1:07 p.m.

3 - - -

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1 Tuesday Afternoon Session
February 25, 2020
2 1:07 p.m.

3 - - -

4 THE VIDEOGRAPHER: We are back on
5 the record at 1:07 p.m.

6 BY MR. KUHL:

7 Q. Mr. Glasgow, I want to change
8 gears and talk about Veolia for a little bit.

9 Do you recall that Veolia was
10 brought in in early 2015?

11 A. I do, yes.

12 Q. Do you know why Veolia was brought
13 in?

14 A. I did not -- as I say, I was not
15 privy to calling them in. I think it was
16 requested from our DPW director, as far as I
17 know.

18 Q. Did he explain to you why he
19 wanted Veolia to come in?

20 A. Yeah. In a sense, you know, it
21 was to, you know, take a look at our process and
22 give some report on our efforts and our
23 functions.

24 Q. He wanted a second pair of eyes on

1 the situation, right?

2 A. Yep, you could say that.

3 MR. CAMPBELL: Object to the form.

4 Q. Was it your understanding that
5 Veolia's a large international drinking water
6 expert?

7 MR. CAMPBELL: Object to the form.

8 A. Yes.

9 Q. And if I understood your
10 testimony -- well, let me strike that again.

11 - - -

12 (Glasgow Deposition Exhibit 64 marked.)

13 - - -

14 BY MR. KUHL:

15 Q. I'm going to hand you Exhibit 64,
16 which is a copy of the March 12, 2015 report.

17 Now, if I recall your testimony
18 from yesterday correctly, you don't believe that
19 you saw a copy of this report immediately?

20 A. Correct. Yes.

21 Q. And your best recollection is it
22 was sometime early summer?

23 A. Of '15, correct. Yes.

24 Q. But you did discuss some of its

1 conclusions with other people at the city,
2 correct?

3 A. Yeah. I would say, yes.

4 - - -

5 (Glasgow Deposition Exhibit 65 marked.)

6 - - -

7 BY MR. KUHL:

8 Q. I'm going to hand you Exhibit 65.
9 It has a Bates range of COF_FED_0108601 through
10 02.

11 Now, Exhibit 65, you're included
12 on this e-mail chain, aren't you, Mr. Glasgow?

13 A. Yes.

14 Q. I want you to turn to the second
15 page. And it starts out with an e-mail from
16 Mr. Brubaker.

17 Do you see that?

18 A. Yes.

19 Q. Who is Mr. Brubaker?

20 A. He worked at the wastewater
21 treatment plant. He was the -- I believe at the
22 time environmental compliance inspector.

23 Q. In Mr. Johnson's response to
24 Mr. Brubaker's e-mail, he states "One of the

1 consultant's recommendations was to quadruple
2 the amount of ferric we are feeding now."

3 Do you see that?

4 A. Yes.

5 Q. Do you know who that consultant
6 was?

7 A. I believe it was Veolia.

8 Q. And, in fact, if you go over to
9 the first page, right in the middle, he refers
10 to jar testing conducted by Veolia.

11 Do you see that?

12 A. Yes.

13 Q. Do you recall discussing with
14 Mr. Johnson or anybody else at the city Veolia's
15 recommendation that Flint significantly add the
16 amount of ferric chloride?

17 A. I vaguely remember discussing it.
18 It seems like that was in regards -- at least
19 the discussion I can recall -- in regards to
20 increasing the ferric had to do with, you know,
21 the precursors to TTHM formations. I believe
22 that was some of the discussions I've had.

23 So the thought was increase the
24 ferric, reduce the amount of precursors to form

1 TTHMs, and that may -- may assist us with the
2 TTHM issue.

3 Q. If you look on page 4 of Exhibit
4 64, Veolia's recommendation right in the middle
5 is a recommendation that the ferric chloride
6 doses be raised up to 100-micrograms per liter.

7 Do you see that?

8 A. I do, yes.

9 Q. And that was significantly higher
10 than you were adding at the time, right?

11 A. Yes.

12 Q. Going back to the monthly
13 operating reports, it looks like the average
14 dosage for ferric chloride in March was 15.

15 Do you see that?

16 A. Yes.

17 Q. And then in April, it shot up to
18 16.5.

19 Do you see that?

20 A. Yes.

21 Q. Then it went up to 19.5 for May.

22 Do you see that?

23 A. Yes.

24 Q. And 19.7 for June.

1 Do you see that?

2 A. Yes.

3 Q. Is it your recollection that the
4 city decided, at least in part, to increase the
5 amount of ferric chloride it was adding to the
6 water based upon Veolia's recommendations?

7 A. Yes. To my knowledge, yes.

8 Q. Going back to Exhibit 64. Can I
9 ask you to turn to page 10. And right up at the
10 very top, these are the recommended actions that
11 Veolia had.

12 Do you recall those? I think I
13 looked at these yesterday.

14 A. Yes.

15 Q. And at the top, it suggests that
16 the city's engineer initiate discussions with
17 the state on the addition of a corrosion control
18 chemical.

19 Do you see that?

20 A. Yes.

21 Q. Did Veolia advise you that they
22 believed that there was any significant urgency
23 to taking that action?

24 MR. CAMPBELL: Object to the form.

1 He never spoke with Veolia.

2 A. Yeah. Not to myself, no.

3 MR. KUHL: I appreciate your
4 objection.

5 MR. CAMPBELL: You're welcome.

6 MR. KUHL: Next time let's just
7 maintain it with the rules.

8 MR. CAMPBELL: I think that's
9 consistent with the rules.

10 MR. KUHL: I'm not so sure about
11 that.

12 MR. CAMPBELL: Don't try to
13 mislead the witness.

14 MR. KUHL: That is exactly my
15 point.

16 BY MR. KUHL:

17 Q. Do you know if Veolia advised
18 anybody else that there was a significant lead
19 problem ongoing in the city?

20 A. My only recollection had to do
21 with a previous exhibit with an e-mail, and it
22 sounded like Mr. Bincsik had spoke with someone
23 from Veolia.

24 Q. Did Veolia communicate to anybody

1 at the city that you're aware of that they
2 thought there was a substantial risk of lead
3 leaching into the system and impacting the
4 public health?

5 A. Well, as I said, that --
6 Mr. Bincsik's e-mail was the only thing that
7 lead me to that.

8 Q. Well, did you go to any of the
9 public meetings that Veolia participated in?

10 A. I imagine I was at least a couple
11 of them.

12 Q. Do you recall Veolia telling the
13 public that there was a danger with lead
14 leaching into the water?

15 A. I do not recall that.

16 Q. I'm going to switch gears again,
17 Mr. Glasgow. And I'm going back to your
18 testimony during the preliminary exam. Can I
19 ask you to -- this is the April 16, 2018
20 testimony again.

21 A. Okay.

22 Q. And I'll direct you to pages 49
23 and 50.

24 Starting on page 49, there's a

1 discussion about how you believed that the water
2 would be scale forming. And then it goes over
3 onto page 50, and that's really where I want to
4 direct your question, to line 19 through 21,
5 where you state, "This is the same thing he had
6 heard from our engineering firms as well."

7 A. Yes.

8 Q. What engineering firms are you
9 referring to? Take your time.

10 A. Well, in line 20, my answer is,
11 "This is the same thing he had heard from our
12 engineering firms as well."

13 When I think of engineering firms,
14 I think of LAN, and I would have to group Veolia
15 in there as well. Those are -- uh-oh.

16 (Fire alarm sounds.)

17 MR. KUHL: Can we go off the
18 record.)

19 THE VIDEOGRAPHER: We are going
20 off the record at 1:18 p.m.

21 (Recess taken.)

22 THE VIDEOGRAPHER: We are back on
23 the record at 1:26 p.m.

24

1 BY MR. KUHL:

2 Q. Mr. Glasgow, switching topics
3 slightly.

4 Isn't it correct that you told the
5 FBI in March 2016 that nobody pressured you to
6 put the Flint water treatment plant online?

7 A. Yes, that is in my testimony.

8 Q. And did you tell the FBI in
9 March 2016 that DEQ's interpretation that Flint
10 was entitled to two six-month testing periods
11 before making a final determination as to its
12 corrosion control treatment was consistent with
13 your own review of the statute?

14 MR. MARKER: Objection to form and
15 foundation.

16 A. I will say yes.

17 Q. And did you testify at the
18 April 16, 2018 preliminary exam that based upon
19 the sampling results from the neighbors around
20 Ms. Walters' home, that you didn't believe that
21 there was a widespread problem in the city?

22 A. Yes, that is correct.

23 - - -

24 (Glasgow Deposition Exhibit 66 marked.)

1 - - -

2 BY MR. KUHL:

3 Q. I've handed you, Mr. Glasgow,
4 Exhibit 66 which has a Bates range
5 COF_FED_0422811 through 12.

6 Do you know if you've seen this
7 document before?

8 A. I believe I have, yes.

9 Q. And this refers to an August boil
10 water advisory in the city of Flint?

11 A. Correct. Yes.

12 Q. And do you recall investigating
13 what the cause was of that test showing fecal
14 coliform bacteria?

15 A. Yes, I do.

16 Q. And do you recall reaching the
17 conclusion that an abnormal test result
18 triggered that advisory?

19 A. Yes.

20 - - -

21 (Glasgow Deposition Exhibit 67 marked.)

22 - - -

23 BY MR. KUHL:

24 Q. And, sir, we've handed you Exhibit

1 67 which has a Bates range COF_FED_0036658
2 through 59.

3 Have you seen this document
4 before?

5 A. I believe so, yes.

6 Q. And this relates to the second
7 boil water advisory issued to the city of Flint,
8 correct?

9 A. Correct.

10 Q. And is it correct that the city's
11 conclusion was that this boil water advisory was
12 due to a broken valve that was found in the
13 system?

14 A. Yes.

15 Q. And that broken valve had led to a
16 flow -- or excuse me -- a flow in the system?

17 A. Correct. Yes.

18 Q. And so presuming you had, what, a
19 cross-connection problem?

20 MR. MARKER: Objection; form,
21 foundation.

22 Q. Let me ask. Do you know, was it a
23 cross-connection problem?

24 A. I do not know if it was a

1 cross-connection problem.

2 Q. Now, these two boil water
3 advisories, September and August of 2014, were
4 those the only boil water advisories issued
5 during the switch?

6 A. I do not believe so.

7 Q. Do you think there was another
8 one?

9 A. I'm trying to recall. For some
10 reason, I feel like there was another one, but
11 I'm sure we'd have documentation if there was.

12 Q. Do you have any recollection as to
13 what that time frame might have been?

14 A. September, October. I mean, I may
15 be confusing the following year. I may be
16 confusing a notice or advisory thinking of the
17 TTHM issue as well. I apologize. My memory is
18 just not -- I mean, there's a lot of documents
19 in this case. I'm not going to suggest that
20 I've reviewed or seen them all.

21 Q. Outside of at least these two boil
22 water advisories, do you recall there being a
23 widespread problem in the city with coliform
24 bacteria?

1 MS. SMITH: Objection.

2 A. I would say during the warmer
3 summer months, there was an issue.

4 Q. You would have it, but do you
5 recall there being any violations of the
6 standards?

7 A. I do not recall.

8 Q. You don't recall any violations,
9 or you just don't recall?

10 A. I thought we were still
11 discussing -- besides these two violations or
12 boil water notices.

13 Q. Correct. I'm sorry. Let me start
14 over again just to make sure we're not --
15 generally speaking, besides these two water
16 violations, do you recall there being widespread
17 problems with coliform bacteria in the Flint
18 water distribution system?

19 A. I don't know if I'd characterize
20 it as widespread. I will say during routine
21 monthly sampling, there was times when we would
22 have positive samples for coliform bacteria.

23 Q. But that wasn't unusual, correct?

24 A. Correct.

1 Q. I mean, you had that prior to the
2 switch, right?

3 A. Correct.

4 Q. And it's not unusual to have it in
5 any water system, right?

6 A. Correct.

7 Q. Do you recall there being any
8 other detections of E. coli in the water
9 distribution system?

10 A. I do not recall any E. coli.

11 Q. Do you recall that GM had some
12 concerns about the Flint water, Mr. Glasgow?

13 A. Yes, I do.

14 Q. And do you recall what their
15 concern was?

16 A. Their concern, if my memory serves
17 me correct, it had to do with a rusting of
18 parts. Yeah, so corrosion --

19 Q. Were you involved -- I'm sorry. I
20 apologize.

21 A. I was just going to say, yeah,
22 they had some corrosion on parts that were
23 sitting -- sitting in the plant there.

24 Q. Do you recall being involved in

1 the investigation into the cause of the problems
2 at GM?

3 A. I do recall attending a meeting at
4 GM and taking a little walk through one of their
5 plants in regards to their complaints.

6 Q. Do you recall reaching the
7 conclusion that the reason GM was experiencing
8 those problems is because they were recycling
9 their water?

10 A. Vaguely, yes. It had to do with
11 their CNC machines I believe, yeah, and they
12 would keep recycling water.

13 Q. And is it correct you didn't
14 believe because the city -- well, let me start
15 that again.

16 Is it correct you believed that
17 just because GM was having a problem didn't mean
18 that there was a larger problem in the Flint
19 water system?

20 A. Correct. Yes.

21 Q. Did the city of Flint issue a TTHM
22 violation notice to its residents?

23 A. Yes.

24 Q. And did that notice instruct

1 residents to stop drinking the water?

2 A. I would have to read the notice.

3 I don't recall if it said to stop drinking or if
4 it was just a precaution to notify them.

5 Q. Right. Do you recall that the EPA
6 had guidelines as to the type of notice that
7 would have to be issued when you would have a
8 TTHM violation?

9 A. I'll say I was aware EPA had, I
10 guess, guidelines, but I would defer to my
11 primacy agent, the MDEQ, for the guidelines of
12 how we would notify.

13 Q. Do you recall being involved in
14 the issuance of the notices to the residents?

15 A. Yes. Somewhat, yes.

16 Q. Do you recall seeing that notice?

17 A. Yes.

18 Q. And do you recall that notice
19 telling the residents not to drink the water?

20 A. I can't remember the exact
21 language of it. I'm sure I signed off on the
22 notice. But without it in front of me and
23 reading it, I can't --

24 Q. And you can't recall whether or

1 not the EPA believed that TTHMs were a
2 substantial risk to public health?

3 MR. MARKER: I'll object to form
4 and foundation.

5 A. Yeah, I can -- I can understand
6 that there was a -- yeah, an issue with public
7 health with TTHMs.

8 Q. Yes. I mean, there was a concern,
9 but do you recall how the EPA quantified that
10 risk?

11 A. I do not recall how they
12 quantified it.

13 - - -

14 (Glasgow Deposition Exhibit 68 marked.)

15 - - -

16 BY MR. KUHL:

17 Q. Exhibit 68 has a Bates range of
18 COF_FED_0073939 through 949.

19 Have you seen this document
20 before, Mr. Glasgow?

21 A. Yes, I have.

22 Q. What is it?

23 A. It is a yearly consumer confidence
24 report that the city would distribute to

1 residents.

2 Q. And did the city issue such a
3 report on an annual basis?

4 A. Yes.

5 Q. Can I ask you to turn to --
6 they're not numbered, but it's the third page.
7 It's got a Bates range of 941 on it. And in the
8 second paragraph, there's a discussion about
9 lead.

10 Do you see that?

11 A. Yes.

12 Q. Did the annual report that Flint
13 issued to its residents include that warning
14 each year?

15 A. Yes. To the best of my knowledge,
16 yes.

17 Q. All right. This is my last
18 exhibit, Mr. Glasgow.

19 - - -

20 (Glasgow Deposition Exhibit 69 marked.)

21 - - -

22 BY MR. KUHL:

23 Q. Exhibit 69 has a Bates range
24 COF_FED_0380408 through 413.

1 Mr. Glasgow, do you recall seeing
2 this document before?

3 A. Offhand here, I don't recall. I
4 would think I would have seen that.

5 Q. Do you recall that the city had a
6 series of public meetings in the January, early
7 February time frame to talk about the water
8 issues?

9 A. Yes, I do.

10 Q. Can I ask you to turn to the --
11 it's second page, the first page of the
12 memorandum. And under "City of Flint -
13 Questions and Answers," the first question is,
14 "Is it currently safe to drink City of Flint
15 water?"

16 Do you see that?

17 A. Yes.

18 Q. And what's the answer?

19 A. "Yes. Water from the City of
20 Flint meets all of the EPA regulatory standards
21 of the Safe Drinking Water Act."

22 Q. Was that your understanding on
23 February 16, 2015?

24 A. I will say yes, that was my

1 understanding at the time.

2 MR. KUHL: That's all the
3 questions I have for Mr. Glasgow at this
4 time. And I'll keep my remaining time
5 for any follow-up.

6 THE VIDEOGRAPHER: We're going off
7 the record at 1:40 p.m.

8 (Recess taken.)

9 THE VIDEOGRAPHER: We are back on
10 the record at 1:46 p.m.

11 - - -

12 EXAMINATION

13 BY MR. MORRISSEY:

14 Q. Good afternoon, Mr. Glasgow.

15 A. Good afternoon.

16 Q. I know it's been a long couple
17 days. My name is Steve Morrissey. I am one of
18 the lawyers for a proposed class of plaintiffs
19 that includes folks in the city of Flint, just
20 so you understand who you're talking to.

21 Now, you began working in Flint in
22 2001; is that right?

23 A. Correct. Yes.

24 Q. And from 2001 through April 2014,

1 did Flint rely on Lake Huron water from Detroit
2 for its drinking water supply?

3 A. Yes.

4 Q. Were there any significant lead
5 contamination problems during that time frame?

6 A. Not that I'm aware of, no.

7 Q. You understood there were
8 corrosion controls in place during that time
9 frame, correct?

10 A. I understood -- I was going to say
11 I understood Detroit was adding phosphate as a
12 corrosion inhibitor.

13 Q. Orthophosphate specifically,
14 correct?

15 A. Correct. Yes.

16 Q. And in the fall of 2015 and after
17 the crisis, you know, came to ahead, did the
18 city again make a switch in its water supply?

19 A. Yes, it.

20 Q. And what was the switch that was
21 made then?

22 A. Back to DWSD and Lake Huron water.

23 Q. And following the switch back
24 after the fall of 2015, were corrosion controls

1 used again?

2 A. Yes.

3 Q. And following the switch back, did
4 the lead problems that you had in the
5 distribution system get better?

6 MR. CAMPBELL: Objection;
7 foundation.

8 A. I will say I believe they slowly
9 got better. It wasn't flip the switch and
10 automatically back to normal.

11 Q. Right. Sure. It certainly
12 stopped getting worse, right?

13 A. Correct. Yes.

14 MS. SMITH: I'm sorry. Could you
15 speak up?

16 THE WITNESS: Absolutely.

17 Q. Yesterday you were asked whether
18 the city had corrosion controls in place between
19 April of 2014 and the fall of 2015. And it was
20 suggested that what you had in place amounted to
21 zip-a-dee-doo-dah with respect to corrosion
22 control.

23 Do you recall that?

24 MR. MARKER: I'll object to the

1 form.

2 MR. CAMPBELL: Object to the form.

3 A. I do, yes.

4 Q. And, you know, I don't think
5 zip-a-dee-doo-dah is a technical term. So just
6 so it's clear, you had no corrosion control in
7 place between April 2014 and the fall of 2015,
8 correct?

9 MR. KIM: Objection to form.

10 A. Correct. We were not adding any
11 additional chemicals to account for corrosion.

12 Q. And you weren't monitoring
13 corrosion on a day-to-day basis?

14 A. No.

15 Q. Yesterday you testified it was
16 your belief that the city was supposed to
17 conduct an optimal corrosion control evaluation
18 before making the stitch to the Flint River.

19 Do you recall that?

20 MR. MARKER: I'll object to the
21 form.

22 A. I recall discussing that. I don't
23 know -- I don't recall in regards to prior to
24 the switch.

1 Q. Well, at some point, you went to
2 Mr. Prysby and Mr. Busch, right --

3 A. Correct.

4 Q. -- before the switch?

5 When you went to them, it was your
6 belief that you should do some kind of corrosion
7 control evaluation before making the switch,
8 right?

9 MR. KUHL: Objection to form.

10 Misstates his testimony.

11 A. I was under the assumption we
12 would add orthophosphate, because I inquired
13 about our testing frequency of that chemical.

14 Q. And at that point, had you heard
15 of something called an optimal corrosion control
16 treatment evaluation or OCCTE?

17 A. I'll say I heard of it, but I
18 wasn't too familiar with it.

19 Q. You're not an engineer, right?

20 A. Correct.

21 Q. You have an undergraduate degree
22 in chemistry?

23 A. Chemistry and biology, yes.

24 Q. But you're not -- you're not an

1 engineer?

2 A. Correct.

3 Q. The city had engineers working
4 with it with respect to its water treatment
5 plant, right?

6 A. Correct. Yes.

7 Q. LAN was under a long-term contract
8 to provide engineering services to the city,
9 right?

10 MR. GAMBLE: Objection; form,
11 foundation.

12 A. Correct.

13 Q. And you understood the folks who
14 were working with you at LAN were engineers,
15 right?

16 A. Correct. Yes.

17 Q. And you expected the engineers who
18 were advising you to have expertise in their
19 field, right?

20 MR. GAMBLE: Objection; form,
21 foundation.

22 A. Correct, I did.

23 Q. And you relied on these experts in
24 making decisions, right?

1 MR. GAMBLE: Objection; form.

2 A. I did rely on their expertise,
3 yes.

4 Q. Now, from your testimony
5 yesterday, I understand that Mr. Prysby and
6 Mr. Busch from the state told you that you
7 didn't need to do anything further with respect
8 to corrosion control before making the switch;
9 is that right?

10 A. That is correct, yes.

11 Q. Did anyone from LAN speak up and
12 say, "That's not right"?

13 MR. GAMBLE: Objection to form.

14 A. Not that I recall, no.

15 Q. Did anyone from LAN write a memo
16 and say, "That's just not consistent with the
17 Safe Drinking Water Act. You actually do need
18 to evaluate corrosion control before making the
19 switch, and if you don't, you'll be putting the
20 health of the people of Flint at risk"?

21 MR. GAMBLE: Objection; form,
22 foundation.

23 A. No.

24 Q. Did anyone from LAN in that time

1 before you made the switch speak up in any way
2 about the potential problems that could result
3 from not addressing corrosion control before
4 making the switch?

5 MR. GAMBLE: Objection to form,
6 foundation.

7 A. Not that I recall, no.

8 Q. Moving forward into the February,
9 March 2015 period, you understood that Veolia
10 was doing engineering work for the city, right?

11 A. Correct. Yes.

12 Q. And you understood the folks from
13 Veolia who were working with the city were
14 engineers as well, right?

15 A. Correct. Yes.

16 Q. There were a couple of these folks
17 from Veolia who were working in your lab; is
18 that right?

19 A. Yes.

20 Q. And yesterday you testified you
21 saw these folks there. Do the names Marvin,
22 Depin -- do those ring a bell?

23 A. The Marvin rings a bell, but I --
24 you know, and the only way that was stimulated

1 was through some earlier exhibits.

2 Q. Okay. And I'm going to show you
3 some other documents in a bit that might refresh
4 your recollection as to any conversations you
5 had with Marvin or Mr. Gnagy, okay?

6 But you don't recall Mr. Gnagy
7 speaking up and saying, "Look, the fact that you
8 didn't do anything about corrosion control
9 before making that switch is a problem," do you?

10 A. No, I do not.

11 Q. You didn't get any document from
12 Veolia that said, "The fact you didn't address
13 corrosion control before making the switch is a
14 problem," did you?

15 A. No, I did not.

16 Q. Did you ever receive any sort of
17 letter, memo, presentation, or e-mail from
18 anyone at LAN or Veolia that said that the
19 absence of corrosion control was a threat to
20 human health in the city of Flint?

21 A. No, I did not.

22 Q. Did you ever receive a letter,
23 memo, presentation, or e-mail from anyone at LAN
24 or Veolia saying that the absence of corrosion

1 control could cause many millions of dollars in
2 damage to pipes throughout the city of Flint?

3 A. No, I did not.

4 MR. GAMBLE: Objection to form.

5 Q. If someone from LAN or Veolia had
6 spoken up to you and said, "The fact that you
7 haven't addressed corrosion control poses a
8 threat to human health," what do you think you
9 would have done?

10 MR. CAMPBELL: Object to the form.

11 MR. GAMBLE: Foundation.

12 MR. MARKER: I'll join.

13 A. I would have -- using them as kind
14 of experts above my own abilities, I would take
15 it into account. I would question it and ask
16 further about it.

17 Q. These are experts that the city
18 had brought in to help deal with these problems,
19 right?

20 A. Correct.

21 Q. You understood that Veolia was a
22 global firm who had brought supposedly their
23 worldwide water experts in to help you, right?

24 A. Correct. Yes.

1 Q. And you understood that LAN was an
2 engineering firm that had been working with the
3 city for decades and supposedly had engineering
4 expertise to help you, right?

5 MR. GAMBLE: Objection; form.

6 A. Correct. Yes.

7 Q. So you expected these people to
8 speak up about problems, right?

9 A. Yes. And guide our actions, yes.

10 Q. And that's what an engineer does,
11 isn't it?

12 MR. MARKER: Objection to form.

13 A. Yes. Many times, yes.

14 Q. During the course of your work
15 with LAN, did they ever make suggestions that
16 you said, "Hey, that's a good idea. We'll make
17 that switch"?

18 A. I don't recall.

19 Q. Well, and just think about the
20 whole design process for the plant --

21 A. Yeah.

22 Q. -- when you're making the switch.
23 They were heavily involved in that whole
24 process, correct?

1 A. Yeah, when you think about
2 upgrades to equipment and electrical supplies
3 and -- yeah, I hate to say I didn't -- I didn't
4 question their suggestions on that. We just
5 went through with it.

6 Q. Right. Was there ever a
7 suggestion that LAN made where you said, "Nah.
8 That's crazy. I'm not going to do it"?

9 A. No, I can't say that there was.

10 Q. Do you think it would be
11 appropriate for you to second-guess the
12 engineering advice provided by one of your
13 expert engineers?

14 A. Not particularly, no.

15 Q. I mean, if you disagreed with it,
16 you'd raise the issue with your boss, wouldn't
17 you?

18 A. Usually, yes. Yep.

19 Q. Now, yesterday you were asked by
20 counsel for Veolia about criminal charges that
21 had been brought against you. I just want to
22 clear that record up a bit.

23 Counsel said you were charged with
24 a felony. Do you recall that?

1 A. Yes.

2 Q. You weren't convicted of a felony,
3 right?

4 A. No.

5 Q. And you ultimately plead no
6 contest to a misdemeanor; is that right?

7 MR. KIM: Objection as to form.

8 MR. MARKER: Objection; form,
9 foundation.

10 A. I pled no contest, but the plea
11 was taken under advisement, so the plea was
12 never entered.

13 Q. Okay. And you're still able to
14 work as a water treatment plant operator, right?

15 A. Correct. Yes.

16 Q. And you cooperated in the
17 investigations that were brought by the various
18 government officials, right?

19 A. Oh, absolutely. Yes.

20 Q. And you've provided truthful
21 testimony throughout those investigations,
22 right?

23 A. Yes, I have. Yep.

24 Q. Has anyone ever claimed that your

1 testimony was untruthful?

2 A. Not to my knowledge, no.

3 Q. Has anyone ever accused you of
4 failing to answer any question that anyone from
5 LAN asked you?

6 A. No.

7 Q. Has anyone ever accused you of
8 failing to answer any question that anyone from
9 Veolia asked you?

10 A. No.

11 Q. Can you think of any time that
12 anyone from LAN asked you a question where you
13 didn't answer it fully and truthfully?

14 A. No, not to my knowledge.

15 Q. And same for Veolia. During the
16 time that the folks for Veolia were working
17 there, Mr. Gnagy and Mr. Chen, did you ever have
18 a time where they asked you questions and you
19 said, "I'm not going to answer that"?

20 MR. CAMPBELL: Object to the form.

21 A. No.

22 Q. Did you ever have a time where
23 they asked you a question and you gave them
24 false information?

1 MR. CAMPBELL: Object to the form.

2 A. No.

3 Q. Anytime you were asked a question
4 by an engineer, you gave them full and truthful
5 answers?

6 A. Absolutely, yes.

7 Q. Yesterday you were asked some
8 questions about water quality and water safety.

9 Do you recall that?

10 A. Yes.

11 - - -

12 (Glasgow Deposition Exhibit 70 marked.)

13 - - -

14 BY MR. MORRISSEY:

15 Q. And I think it was counsel for LAN
16 was trying to draw some distinction between the
17 two concepts. I did a little drawing that I'm
18 going to hand you. It's marked as Exhibit 70.

19 MR. MORRISSEY: I don't have a
20 copy. I'm sorry. But it's just two
21 circles. I'll have copies of everything
22 else.

23 BY MR. MORRISSEY:

24 Q. It's a simple Venn diagram. And

1 I'll do this from memory. It's a larger circle
2 that says "Water Quality," right?

3 A. Correct. Yeah.

4 Q. And then inside it is a smaller
5 circle that says "Water Safety."

6 Do you see that?

7 A. Yes.

8 Q. Would you agree that water safety
9 is a subset of the things you're concerned about
10 when you talk about water quality?

11 MR. KIM: Objection to form.

12 A. Yes, I would.

13 Q. I mean, it's impossible to have
14 quality water that is not safe, correct?

15 MR. KIM: Objection as to form.

16 A. I would agree with that statement,
17 yes.

18 Q. I mean, if the water is going to
19 poison people with lead, it is by definition not
20 quality water, right?

21 MR. MARKER: Objection; form.

22 A. Yes.

23 Q. If the water is going to poison
24 people with Legionella, it is by definition not

1 quality water, right?

2 MR. MARKER: Objection; form.

3 A. I would agree, yes.

4 Q. If the water is going to degrade
5 people's pipes such that they sustain millions
6 of dollars in damage, you'd agree it's not
7 quality water, right?

8 MR. MARKER: Form.

9 MR. KIM: Objection as to form.

10 A. I would agree.

11 Q. Is it your understanding that
12 engineers have a duty to speak up about issues
13 that pose a threat to human health?

14 MR. GAMBLE: Objection to form.

15 MR. CAMPBELL: Objection to form.

16 A. I would say yes.

17 Q. What is that understanding based
18 on?

19 A. I believe they have their own code
20 of ethics, which I would hope everybody goes by,
21 including myself. But, yes, similar to a
22 doctor's code of ethics, I think the engineers
23 have something along the same lines.

24 Q. And you have decades of experience

1 working directly with engineers, right?

2 A. Correct. Yes.

3 Q. So it's based on your experience
4 you know that engineers speak up about things
5 when there's an issue that poses a threat to
6 human health, right?

7 MR. GAMBLE: Objection; form.

8 A. Yes.

9 Q. What was previously marked as
10 Exhibit -- Kurtz Exhibit 7, which came up
11 yesterday, you should have it in the set there.

12 MR. MARKER: Actually, I don't.
13 Because it's in the big binder that he's
14 got.

15 MR. MORRISSEY: The binder you
16 gave the witness yesterday, you're not
17 going to let him keep it?

18 MR. GAMBLE: No. I took it back.
19 I don't have it with me right now.

20 MR. MORRISSEY: For the record, if
21 you hand the witnesses a set of
22 documents, leave it with the witness.

23 Do you have it somewhere?

24 MR. GAMBLE: I can get it on a

1 break.

2 BY MR. MORRISSEY:

3 Q. All right. It won't come up again
4 for a bit. I'll hand you my copy.

5 This is a set of meeting notes
6 from a May 22, 2013 meeting.

7 Do you see that?

8 A. Yes.

9 Q. And was that a meeting you were at
10 with the folks from LAN?

11 A. I believe so, yes.

12 Q. Can you read the paragraph I
13 highlighted?

14 A. Okay. It says, "Brent believes
15 LAN has the most knowledge of the Flint water
16 treatment plant and is most qualified to design
17 improvements to, number one, prepare the plant
18 for full-time interim operation using the Flint
19 River, and, number two, prepare the plant for
20 full-time permanent operation using Lake Huron
21 supply from KWA."

22 Q. And who's Brent there?

23 A. That's Brent Wright, the water
24 plant supervisor.

1 Q. Got it. And "prepare the plant
2 for full-time operations," did that include
3 being able to supply quality water to the people
4 of Flint?

5 MR. CAMPBELL: Objection to form,
6 foundation.

7 A. I would believe so, yes.

8 Q. You would agree that the plant was
9 not ready for full-time operation until it was
10 ready to distribute quality water to the people
11 in the city, right?

12 A. Yeah. I can agree with that, yes.

13 Q. I mean, it's a drinking water
14 distribution plant, right?

15 A. Correct. Yep.

16 Q. You can hand that copy back to me.

17 MR. MORRISSEY: I brought a few
18 extra copies of some exhibits I'm going
19 to mark, if you want them.

20 MR. CAMPBELL: You carried these
21 all that way?

22 MR. MORRISSEY: FedEx.

23 - - -

24 (Glasgow Deposition Exhibit 71 marked.)

1 - - -

2 BY MR. MORRISSEY:

3 Q. Mr. Glasgow, Exhibit 71 is a copy
4 of the city's contract with LAN from June 2013.

5 MR. GAMBLE: Objection to form.

6 Q. Do you know if you've seen this
7 document before?

8 MR. GAMBLE: Objection to form.

9 A. I most likely have seen it.

10 Q. All right. I'm going to walk you
11 through a few provisions in it. It's a cover
12 letter with an attached contract and various
13 attachments.

14 First, on the cover letter page,
15 dated June 10, 2013, in the second sentence, it
16 says, "LAN's staff has the knowledge, expertise,
17 and the technical professionals to handle all
18 aspects of the project."

19 Do you see that?

20 A. Yes, I do.

21 Q. And then you see on the third
22 page, there's a list of staff names for LAN and
23 Rowe on the page Bates-stamped
24 LAN_FLINT_001851411.

1 Do you see that?

2 A. Yes, I do see that.

3 Q. And these folks, Mr. Green,
4 Mr. Matta and Mr. Hansen, in particular, those
5 are people that you'd worked with for a long
6 time, right?

7 A. Yes.

8 Q. And this indicates that Mr. Green
9 had been working with the Flint water
10 distribution system for even longer than you
11 had, hadn't he?

12 A. Yes, that is correct.

13 Q. Back to 1997, right?

14 A. Correct.

15 Q. And that's also true of Mr. Matta
16 and Mr. Hansen, right?

17 A. Yes. To the best of my knowledge,
18 yes.

19 Q. And you understood that these
20 people, unlike you, were all engineers, right?

21 A. Correct.

22 Q. If you turn to the page that
23 begins -- there's a heading -- it's the next
24 page -- "City of Flint, Michigan" at the top,

1 page 185412 under the heading "Phase II
2 Rehabilitation and Improvements to the Flint
3 Water Plant."

4 Do you see that?

5 A. Yes, I do.

6 Q. And the first sentence there, it
7 says, "The purpose of this agreement is to enter
8 into a contract pertaining to rehabilitation of
9 and improvements to the Flint water plant to
10 provide water supply continuous service."

11 Do you see that?

12 A. Yes.

13 Q. What do you understand "water
14 supply continuous service" to mean?

15 MR. GAMBLE: Objection; form.

16 A. I understand that to be our
17 full-time operation of the plant.

18 Q. And this was drinking water,
19 right?

20 A. Correct.

21 Q. And so to provide continuous
22 service, you needed to provide safe, quality
23 drinking water, right?

24 MR. GAMBLE: Object to form.

1 A. Yeah. That would be the point,
2 yes.

3 Q. If you turn to page 2 of this
4 document. It's the next page. Under
5 "Compensation," it says, "The city shall pay for
6 such scope of services as have been set forth
7 herein, a contract price not to exceed
8 \$2,534,640."

9 Do you see that?

10 A. Yes, I do.

11 Q. You understood that LAN was being
12 paid millions of dollars for their work?

13 MR. GAMBLE: Objection; form,
14 foundation.

15 A. Yes, I did.

16 Q. Page 6, "Scope of Services,"
17 there's a description of the scope of services
18 that LAN was agreeing to that goes on from page
19 6 to page 9.

20 Do you see that?

21 A. Yes, I do.

22 Q. And there are a number of items
23 listed here, but over the period from the summer
24 of 2013 through when the switch was flipped and

1 you started using Flint River water, were you
2 working pretty regularly with folks from LAN on
3 that project?

4 A. I would say yes. I remember
5 Mr. Green, Mr. Matta, and Mr. Hansen being
6 around quite a bit.

7 Q. And were people from LAN involved
8 heavily in that project?

9 MR. GAMBLE: Objection; form.

10 A. I would say yes.

11 Q. And folks from LAN, they didn't
12 stop working with you after the switch was
13 flipped, did they? Strike that.

14 They didn't stop working with you
15 after you made the switch, did they?

16 A. No. They were under contract to
17 help with implementation for KWA.

18 Q. Right. They kept working with you
19 all through the end of 2014 and all through
20 2015, right?

21 A. That sounds right, yes.

22 Q. And it was actually LAN who you
23 hired to implement the corrosion controls that
24 you did starting at the end of 2015, right?

1 MR. GAMBLE: Objection; form.

2 A. That is correct.

3 Q. So these experts from LAN knew how
4 to do what you needed to do to address corrosion
5 control, right?

6 A. Yes.

7 Q. And you don't have any reason to
8 believe that they didn't know in 2014 what they
9 knew in 2015 about corrosion control, do you?

10 MR. GAMBLE: Objection; form.

11 A. I don't believe so, no.

12 Q. "Standard of Performance," page
13 10, it says "Engineer agrees to exercise
14 independent judgment and to perform its duties
15 under this contract in accordance with sound
16 professional practices."

17 Do you see that?

18 A. I do, yes.

19 Q. And was -- it was your
20 understanding that LAN -- they were acting as
21 engineers, right?

22 A. Correct. Yes.

23 Q. And you expected them to perform
24 their duties in a manner consistent with their

1 professional obligations, didn't you?

2 A. Yes, I did.

3 Q. Oh, I forgot one thing there. If
4 you turn to page LAN_FLINT_00185456 under
5 "Lockwood, Andrews & Newnam Inc. (LAN)."

6 Do you see that?

7 A. Yes.

8 Q. Now, you understood LAN was an
9 abbreviation for some longer name?

10 A. Yes, I did.

11 Q. And it reads, "LAN is a national
12 engineering firm offering planning, engineering,
13 and program management services. LAN is
14 consistently rated in the top 100 A/E firms by
15 Engineering News-Record magazine.

16 "As a subsidiary of Leo A. Daly,
17 one of the largest planning, architecture,
18 engineering, and interior design firms in the
19 United States, LAN has access to the expertise
20 of more than 1,100 professionals in 25 offices
21 in 21 cities worldwide."

22 Do you see that?

23 A. Yes, I do.

24 Q. Now, that name Leo A. Daly, you

1 saw that on places like LAN's sign and LAN's
2 letterhead and various other places where you
3 saw the name LAN, didn't you?

4 MR. GAMBLE: Objection; form,
5 foundation.

6 A. I don't recall, I guess.

7 Q. All right. Did the name Leo A.
8 Daly ever stand out to you?

9 A. It does not.

10 Q. Okay. But you see here that LAN
11 presented itself as being a part of Leo A. Daly
12 and having access to 1,100 professionals, right?

13 MR. GAMBLE: Objection to form.

14 A. Correct. Yes.

15 - - -

16 (Glasgow Deposition Exhibit 73 marked.)

17 - - -

18 BY MR. MORRISSEY:

19 Q. What I've marked as Exhibit 73 is
20 an expense report from LAN and Leo A. Daly's
21 files. If you see the names on that, it's from
22 Jeff Hansen at Leo A. Daly to Warren Green at
23 Leo A. Daly.

24 Do you see that?

1 A. Yes.

2 Q. And Mr. Hansen and Mr. Green were
3 folks you worked with, right?

4 A. Correct. Yes.

5 Q. And then under -- on the next page
6 on "Detailed Expense Report" to Leo A. Daly/LAN,
7 on June 26, 2013, there's indication that you
8 had lunch with some folks from LAN and
9 Leo A. Daly on that day, right?

10 A. Yes.

11 Q. And that was a day that you had
12 this in-person meeting that came up yesterday,
13 June 26th, 2013?

14 A. Correct. Yep. It appears to be.

15 Q. Did you know that folks at
16 Leo A. Daly in Omaha were approving the expenses
17 for your lunch?

18 MR. GAMBLE: Objection; form,
19 foundation.

20 A. No, I did not understand that.

21 Q. Did you ever know that LAN was
22 actually run out of Leo A. Daly in Omaha?

23 MR. GAMBLE: Objection; form
24 foundation.

1 A. I did not.

2 Q. Did you know that they co-mingled
3 their accounts and they used the same financial
4 structure, and that people were paid on
5 Leo A. Daly paychecks?

6 MR. GAMBLE: Objection; form
7 foundation.

8 A. I did not.

9 - - -

10 (Glasgow Deposition Exhibit 74 marked.)

11 - - -

12 BY MR. MORRISSEY:

13 Q. What I've marked as 74,
14 Mr. Glasgow, is a June -- I'm sorry --
15 February 10, 2014 e-mail. This is from Jeremy
16 Nakashima at Leo A. Daly to Eric Frechette at
17 Leo A. Daly with copies to Warren Green,
18 Sam Lepore.

19 Do you see that?

20 A. I do, yes.

21 Q. Now, we talked about Mr. Green.
22 Do you know these other folks? It says, "Flint
23 WTP - CP design" as the subject. Do you know
24 these other folks? Mr. Nakashima?

1 A. After reading Jeremy Nakashima, I
2 do remember a couple instances where him and I
3 were in the same room, or he was in the water
4 plant.

5 Q. And on Mr. Nakashima's signature
6 line, it says he's a senior project manager with
7 LAN, Lockwood, Andrews & Newnam, Inc., a Leo A.
8 Daly Company, right?

9 A. Correct. Yes.

10 Q. And the document -- this is from
11 June -- February 14. This is -- what -- you
12 switched end of April 2014?

13 A. Correct. Yes.

14 Q. And these are miscellaneous
15 corrosion control plans from that time; is that
16 right?

17 MR. GAMBLE: Object to form.

18 A. That's what it says under
19 attachments, "Miscellaneous Corrosion Control
20 Components."

21 Q. Did you understand that the folks
22 from LAN and Leo A. Daly were considering
23 corrosion control in this time frame?

24 MR. GAMBLE: Objection; form,

1 foundation.

2 A. I did not.

3 Q. Do you know why they would have
4 been doing that?

5 MR. GAMBLE: Objection; form,
6 foundation.

7 A. I do not.

8 Q. Were you always -- and they were
9 doing all kinds of things relating to the switch
10 to the new treatment plant, right?

11 A. Correct. Yes.

12 MR. GAMBLE: Object to form.

13 Q. Did you know everything they were
14 doing?

15 A. No.

16 Q. So they did all kinds of work
17 relating to the engineering of the new treatment
18 plant that you weren't necessarily kept abreast
19 of on a day-to-day basis, right?

20 MR. GAMBLE: Object to form.

21 A. That's correct. Yes.

22 Q. But for whatever they were doing
23 on corrosion control, did they ever tell you
24 about it?

1 A. No, not that I recall.

2 Q. Now, there wasn't anything that
3 would have stopped anyone from LAN from speaking
4 up and saying, "You, city of Flint, really need
5 to do more about corrosion control," was there?

6 MR. GAMBLE: Objection to form.

7 A. Not to my knowledge, no.

8 Q. I mean, at any time if someone at
9 LAN had identified an issue, they could have
10 spoken up and said, "You really need to have
11 corrosion control in place before you make the
12 switch," right?

13 MR. GAMBLE: Objection to form.

14 A. Yes.

15 Q. And that's also the case once
16 problems started coming up, once it became clear
17 there was discolored water, once people started
18 getting sick, anyone from LAN could have at any
19 time spoken up and said, "Look, the fact you
20 didn't deal with corrosion control before is a
21 problem," right?

22 MR. GAMBLE: Objection to form.

23 A. Yes.

24 Q. But the fact is the engineering

1 firm that you were paying millions of dollars
2 didn't say anything about corrosion control
3 until September 2015 when they asked to be paid
4 more to do more work on corrosion control,
5 right?

6 MR. CAMPBELL: Objection; form and
7 foundation.

8 A. That is correct.

9 - - -

10 (Glasgow Deposition Exhibit 75 marked.)

11 - - -

12 BY MR. MORRISSEY:

13 Q. Exhibit 75 is an e-mail exchange
14 between Jeff Hansen at Leo A. Daly and Steve
15 Luoma at Leo A. Daly.

16 Do you see that?

17 A. Yes.

18 Q. And this is dated March 12, 2014,
19 right?

20 A. Correct.

21 Q. And that's, what, six week before
22 you made the switch?

23 A. Roughly, yeah.

24 Q. And do you know who Mr. Luoma is?

1 A. I do not know who Mr. Luoma is.

2 Q. Mr. Hansen writes to Mr. Luoma,
3 "Steve, one item we still need to look into is
4 what they want for corrosion control. I don't
5 remember exactly what they told us in meetings."

6 Do you see that?

7 A. Yes.

8 Q. Were you aware that LAN was having
9 internal communications about what you needed to
10 do about corrosion control?

11 MR. GAMBLE: Objection; form.

12 A. I was not aware, no.

13 Q. Did Mr. Hansen or anyone else come
14 to you in this March 2014 period and say, "We
15 still need to think about what you're going to
16 do about corrosion control"?

17 A. Not that I recall, no.

18 Q. And he certainly didn't come to
19 you and say anything like, "Look, Mr. Glasgow,
20 if you don't do anything about corrosion
21 control, there's going to be a big problem," did
22 he?

23 A. No.

24 MR. GAMBLE: Objection; form.

1 Q. And he certainly didn't say
2 anything like, "If you don't address corrosion
3 control, there could be a human health problem
4 in the city of Flint"?

5 MR. GAMBLE: Object to the form.

6 A. No, not that I recall.

7 Q. The next exhibit I'm going to get
8 to is Exhibit 27, which was also brought up
9 yesterday. I don't know if you have that.

10 MR. MORRISSEY: Or is that in the
11 binder you all took away, too?

12 MR. GAMBLE: Objection to the
13 sidebar.

14 MR. MORRISSEY: Well, why don't we
15 take a break then, because we've been
16 going a while, and I'm going to spend
17 some time on this exhibit.

18 THE VIDEOGRAPHER: We're going off
19 the record at 2:21 p.m.

20 (Recess taken.)

21 THE VIDEOGRAPHER: We are back on
22 the record at 2:23 p.m.

23 BY MR. MORRISSEY:

24 Q. Mr. Glasgow, we've located Exhibit

1 27, so we're going to proceed with it. This was
2 the Detroit comparisons document that came up
3 yesterday. I have some questions for you about
4 this.

5 First, the attached Excel file,
6 you understand that it's a printout from an
7 Excel file that you made, right?

8 A. Correct. Yes.

9 Q. And that Excel file was comparing
10 characteristics of Flint River water with
11 Detroit water, right?

12 A. Correct. Yes.

13 Q. And were those figures after
14 treatment or before?

15 A. Yes. They are finished water as
16 we would call it, so after treatment.

17 Q. And this kind of comparison -- is
18 this the only time you did a comparison of the
19 chemical characteristics of the water as between
20 the two sources?

21 A. To the best of my knowledge, yes,
22 it is the only time.

23 Q. Did you periodically track the
24 chemical characteristics of Flint water once you

1 made the switch?

2 A. Yes.

3 Q. You had these monthly operating
4 reports that came up earlier.

5 Do you recall that?

6 A. I do, yeah.

7 Q. Now, those reports don't have a
8 field for total sulfates, do they?

9 A. No, they do not.

10 Q. Do you know why?

11 A. No, I do not.

12 Q. Is that a form that you created,
13 or did someone from the district create it?

14 A. It's not a form I created. The
15 monthly operational reports are developed by the
16 MDEQ or were at that time.

17 Q. Okay. Now, this comparison -- to
18 get these figures, what did you need to do?

19 A. Well, number one, the figures from
20 Detroit treated water was based off records they
21 would send to me periodically. As for the
22 finished Flint water out of the Flint River --

23 Q. Well, let me pause you for a
24 second.

1 So the Detroit water, you
2 didn't -- you didn't take a sample of the
3 Detroit water yourself?

4 A. No. We would. Prior to the
5 switch, we would send in monthly operational
6 reports ourselves. So we would test the water
7 that Detroit sent to us. So some of that data
8 was from there. But what we were required to
9 put on our monthly operational reports for
10 Detroit water prior to the switch was a little
11 less than what I had in my comparison.

12 Q. Okay.

13 A. So periodically Detroit would send
14 a one-page summary of other testing results that
15 they had.

16 Q. So for this comparison that you
17 made -- and did you make this right around this
18 time, April 15, 2014?

19 A. Yes, I believe so.

20 Q. So that's about 11 days before the
21 switch; is that right?

22 A. Roughly, yes.

23 Q. And that's in a time frame where
24 if anyone sort of rung alarm bells, you could

1 have stopped, right?

2 MR. MARKER: Objection to form.

3 A. I guess I'm going to ask you to
4 ask that again.

5 Q. There was no physical limit on
6 continuing to take water from Detroit, was
7 there?

8 A. Not that I am -- that I am aware
9 of.

10 Q. If you had been told by anyone to
11 not make the switch on April 26, you could have
12 just continued taking water from Detroit, right?

13 A. As far as I know, there was
14 discussions of Detroit canceling their contract
15 with us, but I -- I wasn't involved in any of
16 that. I remember hearing that at one time,
17 though.

18 Q. And no one from LAN came to you
19 and said, "You can't make the switch in a way
20 that's consistent with looking out for human
21 health, can you?"

22 MR. GAMBLE: Objection; form.

23 A. No, I don't recall.

24 Q. All right. Now, these

1 calculations in the two columns, for the Detroit
2 column for this comparison, did you use some jar
3 or vial of Detroit water?

4 A. No. It would have been past data
5 that we had already acquired over the years. So
6 I would imagine -- and trying to think back when
7 I did make this comparison, I would have tried
8 to dig up at least four or five years of data to
9 get kind of an average of everything.

10 Q. Okay. So in the cover e-mail --
11 this might help refresh your recollection. In
12 the last sentence of your cover e-mail, you say,
13 "It took a couple days. I went through the
14 eight years since I've been at the plant."

15 Do you see that?

16 A. I do see that now, yes.

17 Q. So did you look back at eight
18 years of monthly operating reports and calculate
19 average figures for Detroit?

20 A. Yes.

21 Q. All right. Now, for the Flint
22 column, what did you do?

23 A. The Flint column, I utilized data
24 that we had generated during our normal test

1 runs prior to operation. I had stipulated
2 before we would run on a quarterly basis usually
3 for seven days, five to seven days. So I would
4 have went back through all the history I could
5 find of our test run data, compiled that out
6 together and took averages.

7 Q. So that's an average of the
8 various test runs you had done beforehand?

9 A. Yes. To the best of my knowledge,
10 yes.

11 Q. What equipment do you need to do
12 that analysis?

13 A. Just the -- what analysis, I
14 guess, are you talking about?

15 Q. To make these calculations of how
16 much barium, calcium, et cetera, are in Flint
17 River water, just walk me through the process.
18 What did you need to do? You needed water,
19 right?

20 A. Correct.

21 Q. You needed to put it in some kind
22 of jar?

23 A. Yep, jar or beaker, depending on
24 the test that we were performing.

1 Q. And then is there some kind of
2 chemistry kit that you use to run a test?

3 A. Yes. For each parameter, it would
4 be something different.

5 Q. Was that something that you had in
6 your own lab?

7 A. Yes. The majority of these
8 parameters on the comparison, all except a
9 couple, we had the ability to test right in our
10 lab.

11 Q. Which ones could you not test in
12 your lab?

13 A. Oh, I don't believe we could test
14 barium, nitrate or nitrite, or sodium or
15 sulfate.

16 Q. What did you need to do to get
17 results for those parameters?

18 A. Usually I would send samples out
19 to a contract lab that could perform the
20 testing.

21 Q. Is it hard to find one of those
22 contract labs?

23 A. Not necessarily. For years with
24 the city of Flint water plant, I utilized the

1 state MDEQ drinking water lab, because
2 whatever -- it seemed like whatever my lab
3 couldn't do, they were certified in and could do
4 it.

5 Q. So the state has its own drinking
6 water lab, right?

7 A. Correct. Yes.

8 Q. And they're open every week?

9 A. Yes.

10 Q. And you can ship them a sample of
11 water and ask them to test it for these
12 parameters?

13 A. Correct. Yes.

14 Q. And how much do they charge you
15 for that?

16 A. Oh, each parameter is a little
17 different.

18 Q. Is it like millions of dollars or
19 like dollars?

20 A. I'll say it's more dollars.

21 Q. Okay. And so for some fairly
22 modest amount of money, you can send a sample of
23 water to a state lab that's, what, in Lansing?

24 A. It's in Lansing, yeah.

1 Q. So you could get it there
2 overnight?

3 A. Usually, yes.

4 Q. And this test can then be done
5 within five to seven days? Is that what you
6 said?

7 A. Usually, depending on the
8 parameter. A lot of the parameters need to be
9 tested within a certain time frame, so the lab
10 dictates, you know, what fits their schedule.
11 But they look at when I sent it to make sure
12 they test it within the correct time frame.

13 Q. And the ability to run this kind
14 of test for, say, the amount of sulfates in
15 drinking water isn't like rocket science, right?

16 A. No, I would not say it's rocket
17 science.

18 Q. This is something that labs all
19 over the country can do routinely for fairly
20 modest amounts of money fairly quickly, right?

21 A. Yes, I would agree with that.

22 Q. And it's something that as part of
23 your routine work, you were able to do fairly
24 quickly, right?

1 A. Correct. Yes.

2 Q. Within the budget that the city of
3 Flint had, right?

4 A. Correct. Yes.

5 Q. Did anyone from LAN ever ask for
6 data like this?

7 A. I don't recall if they asked, but
8 I know they had access to it at any time.

9 Q. Right. And if they'd asked you
10 for the data, would you have given it to them?

11 A. Oh, absolutely, yes.

12 Q. What about Veolia? If they'd
13 asked you for this data, would you have given it
14 to them?

15 A. Yes.

16 Q. Now, Mr. Gnagy testified that he
17 asked you if you had the data needed to make a
18 chloride sulfate mass ratio calculation, and
19 that you told him you didn't have access to that
20 data; is that true?

21 A. At that -- well, when I remember
22 Veolia being there, we were running full time,
23 and we weren't testing sulfate or sending it
24 out. So I don't -- I believe that is true. I

1 don't believe I had that data -- some of that
2 data to give him.

3 Q. You had water. You had access to
4 a lab, right?

5 A. Correct. Yes.

6 Q. And just as easily as you could,
7 Mr. Gnagy or anyone else from Veolia could have
8 either themselves or asked you to send it over
9 to Lansing overnight and get the results back in
10 a week, right?

11 MR. MARKER: Object to the form.

12 A. Yes. Yeah. In that scenario,
13 yes.

14 Q. No one from Veolia ever asked you
15 to calculate a CSMR, did they?

16 A. No.

17 Q. No one from Veolia ever asked you
18 for the data needed to calculate a chloride
19 sulfate mass ratio, did they?

20 A. Not that I recall.

21 Q. It's not a difficult calculation,
22 is it?

23 A. No.

24 Q. It's chloride divided by sulfate,

1 right?

2 A. Yep, plugging numbers into a
3 formula.

4 Q. And we're talking sixth, maybe
5 seventh or eighth grade, math, right?

6 A. I could agree with that.

7 Q. No one from Veolia ever asked you
8 for your help gathering the data you would need
9 to conduct that kind of analysis; is that right?

10 A. Not that I recall.

11 Q. Same for LAN; is that right?

12 A. Not that I recall.

13 Q. And you recall yesterday counsel
14 for Veolia asked you about this CSMR, chloride
15 sulfate mass ratio, right?

16 A. Yes.

17 Q. You had heard of that term before
18 this time frame, right?

19 A. I had, yes.

20 Q. You understood that the CSMR is a
21 standard measure of corrosivity that has existed
22 since the 1970s, right?

23 MR. MARKER: Objection; form,
24 foundation.

1 A. I will just say I was aware of the
2 CSMR.

3 Q. And you would expect your
4 engineering professionals who were supposed to
5 be the worldwide specialists in corrosivity, or
6 water anyway, to know which metric should be
7 used to assess corrosivity, wouldn't you?

8 A. I would.

9 Q. Are you aware that dating back to
10 at least the 2000s, if not decades beforehand,
11 it was well recognized that CSMR was the way to
12 measure corrosivity in distribution systems with
13 lead pipes, not the Langelier index?

14 MR. CAMPBELL: Object to the form.

15 MR. MARKER: I'll join.

16 A. Yeah, I -- I was aware of the CSMR
17 terminology. But to the full extent it was
18 used, I was not that familiar.

19 Q. And just looking at the data that
20 you had -- you had this data, right?

21 A. Correct. Yes.

22 Q. And no one from any of the
23 engineering firms ever asked you for it, right?

24 A. No, not that I'm aware of.

1 Q. They didn't ask you if you'd ever
2 done some calculation of what the chlorides and
3 sulfates were in your water, right?

4 A. Right. No.

5 Q. And had you given this to them,
6 they could have seen that Detroit had
7 9 milligrams a liter of chlorides, whereas Flint
8 River had 72, right?

9 A. Correct. Yes.

10 Q. And they could have seen that
11 Detroit had 22 milligrams a liter of sulfates,
12 whereas Flint River had 20, right?

13 A. Correct.

14 Q. Now, you understand that's a
15 significant variance in the CSMR, right?

16 MR. CAMPBELL: Object to the form.

17 A. Yes.

18 Q. It goes from less than 0.5 for
19 Detroit to more than 3.6 for Flint, correct?

20 A. Correct.

21 Q. And that's a calculation you can
22 do in your head just looking at this table,
23 right?

24 A. Correct.

1 Q. In the notation next to chlorides,
2 you wrote, "We use a chloride chemical in
3 treatment which increases end level."

4 Do you see that?

5 A. Yes.

6 Q. The chloride chemical you're
7 referring to there is ferric chloride, right?

8 A. Correct.

9 Q. And as we saw in the summary of
10 monthly operating reports, you increased your
11 ferric dosages as a result of the advice given
12 by LAN and Veolia, correct?

13 MR. GAMBLE: Object to form and
14 foundation.

15 MR. CAMPBELL: Object to form.

16 A. I will say yes.

17 Q. And the impact of increasing
18 ferric dosages was to further increase the ratio
19 of chlorides to sulfates, right?

20 A. Yes.

21 Q. Were you aware that in 2010 -- you
22 remember Mr. Edwards coming up yesterday?

23 A. Yes, I do.

24 Q. Professor Edwards. Do you

1 remember Professor Edwards coming up yesterday?

2 A. I do.

3 Q. You know who Professor Edwards is,
4 right?

5 A. Yes, I do.

6 Q. He's a professor at Virginia
7 Technical University, one of the world's leading
8 experts in water quality?

9 A. Yes.

10 Q. Someone that even experts rely on
11 for expertise, right?

12 A. Correct. Yes.

13 Q. Now, Professor Edwards -- were you
14 aware that in 2010, he had published a paper
15 that was reported in the Journal of the American
16 Water Works Association?

17 I'm going to break that down a
18 bit. Do you know what the American Water Works
19 Association is?

20 A. I do, yes.

21 Q. What is it?

22 A. A conglomeration of a group of
23 individuals that work in the water treatment
24 field.

1 Q. Are you a member?

2 A. I am, yes.

3 Q. Do you get the journal?

4 A. I do.

5 Q. All right. So were you aware that
6 Professor Edwards' team had reported as of 2010,
7 that increasing the CSMR by anything in a range
8 of 0.1 to 1.0 over what it was before could lead
9 to drastic increases in lead leaching?

10 MR. MARKER: I'll object to the
11 form.

12 A. I don't recall seeing his article.

13 Q. Now, no one from LAN or Veolia
14 ever told you that "Look, if your CSMR goes up
15 by 0.1 to 1.0, you could have a drastic increase
16 in lead leaching, did they?

17 A. Not that I recall, no.

18 Q. No one from LAN or Veolia told you
19 that if your CSMR goes up significantly, you
20 could have any increase in lead leaching, did
21 they?

22 A. Not that I recall, no.

23 Q. And what we see here is an
24 increase from 0.41 to 3.0, right?

1 A. Correct. Yes.

2 Q. And that's an increase by -- to
3 3.6, so it's an increase of more than 3, right?

4 A. Correct. Yes.

5 Q. And if anyone from LAN had asked
6 you for this data, you would have given it to
7 them, wouldn't you?

8 A. Correct. Yes.

9 Q. If anyone from Veolia had asked
10 you if you had ever done any calculations of
11 this sort, you would given it to them, wouldn't
12 you?

13 A. Yes.

14 Q. And apart from oral conversations,
15 you're not aware of any kind of data request
16 where Veolia, when they came on the scene in
17 2015, listed categories of documents and data
18 and said, "To evaluate your water treatment
19 processes, we need these categories of documents
20 and data?"

21 You never saw anything like that,
22 did you?

23 A. No, I did not.

24 Q. And you never saw anything like

1 that from LAN either, did you?

2 A. Not that I recall, no.

3 Q. Did anyone from LAN ever tell you
4 that consideration of potential lead leaching in
5 your distribution system was excluded from the
6 scope of their work?

7 A. No, not that I can recall.

8 Q. Did you ever see any document that
9 suggested their scope of work wouldn't include
10 consideration of the impacts of lead leaching in
11 your distribution system?

12 A. Not that I can recall, no.

13 Q. And same questions from Veolia.
14 Did you ever see any document that said Veolia
15 is supposed to ignore the impacts that lead
16 leaching could have on human health in Flint?

17 MR. CAMPBELL: Object to the form.

18 A. No, I do not.

19 Q. Did you see anything that said
20 that anything related to lead was excluded from
21 the scope of Veolia's work?

22 MR. CAMPBELL: Object to the form.

23 A. Not that I recall, no.

24 Q. Did anybody ever tell you that

1 consideration of those issues was excluded from
2 the scope of Veolia's work?

3 MR. CAMPBELL: Object to the form.

4 A. Not that I can recall, no.

5 Q. You understood that Veolia had
6 been brought in to advise you on how to deal
7 with water quality issues, right?

8 A. Correct. Yes.

9 - - -

10 (Glasgow Deposition Exhibit 76 marked.)

11 - - -

12 BY MR. MORRISSEY:

13 Q. I think this exhibit may have been
14 marked yesterday, but at the risk of offending
15 anyone, I'm going to mark it again.

16 Exhibit 76 is a one-page document.
17 It's a set of handwritten notes which I will
18 represent to you Mr. Gnagy described as his own.
19 It has a heading "Corrosion Control Checking,
20 February 18, 2015."

21 Do you see that?

22 A. Yes, I do.

23 Q. Do you recall meeting with
24 Mr. Gnagy and discussing corrosion control in

1 February of 2015?

2 A. I do not.

3 Q. Did Mr. Gnagy ever send you any
4 kind of memo or presentation or analysis or
5 e-mail of any sort that summarized his
6 conclusions on corrosion control?

7 A. Not that I recall, no.

8 Q. Mr. Gnagy's notes indicate that he
9 wrote, "Corrosive water conditions exist."
10 It's the first line with the
11 asterisk there.

12 Do you see that?

13 A. Yes, I do.

14 Q. Did Mr. Gnagy tell you that you
15 had corrosive water in Flint as of
16 February 2015?

17 MR. CAMPBELL: Object to the form.

18 A. I do not recall any conversations
19 with Mr. Gnagy.

20 Q. He says that he flat out told
21 you -- you, Mr. Glasgow. Mr. Gnagy has
22 testified that he flat out told you that there
23 was corrosive water and that it could cause lead
24 problems in Flint.

1 Is that true?

2 A. I do not recall talking with
3 Mr. Gnagy. I couldn't -- I couldn't pick him
4 out of a room.

5 Q. So you didn't have any
6 conversation with Mr. Gnagy that stands out,
7 right?

8 MR. CAMPBELL: Object to the form.

9 A. Not that I can recall, no.

10 Q. I mean, can you imagine having a
11 conversation with anyone where they told you
12 that there was corrosive water in your city that
13 could cause lead contamination problems and it
14 wouldn't stand out to you?

15 A. I would think I could remember
16 that.

17 Q. I mean, you're the kind of person
18 that if someone had told you something like
19 that, you would have written it down and sent an
20 e-mail to a supervisor, right?

21 A. Yes. There would have been
22 discussions.

23 Q. I mean, that's what you routinely
24 did whenever any problem came up in Flint,

1 right?

2 A. Yes.

3 Q. When you got the results from
4 Ms. Walters' house, you didn't hide them, did
5 you?

6 A. No, not at all.

7 Q. You reported them, right?

8 A. Correct. Yes.

9 Q. When you identified early on that
10 you thought the city should be dealing with
11 corrosion control, you raised it to your
12 supervisors, right?

13 A. I did.

14 Q. Now, Mr. Gnagy, he also accused
15 you, Mr. Glasgow, of deliberately withholding
16 lead results from him.

17 Is that true?

18 MR. CAMPBELL: Object to the form.

19 A. That is absolutely not true.

20 Q. Did he ever ask you for any lead
21 result that you didn't provide to him?

22 A. As I said before, I don't ever
23 recall conversations with Mr. Gnagy. Data --
24 our lab was open to them when they were in

1 there. All our data in binders are right on the
2 computer. No matter who was working with us
3 could have access to anything.

4 Q. All right. And you never got any
5 e-mail where Mr. Gnagy or anyone from Veolia
6 said, "Mr. Glasgow, I asked you yesterday for
7 the lead results and you didn't give them to me.
8 I really need them."

9 You didn't get anything like that,
10 did you?

11 A. Nothing like that, no.

12 Q. Now, Mr. Gnagy's one-page of notes
13 here, he says, "Might need to balance pH and
14 corrosion control with THM compliance issues."

15 Do you see that?

16 A. I do.

17 Q. Now, do you understand what that
18 means, "balancing pH and corrosion control"?

19 A. In a sense, yes.

20 Q. What does that mean to you?

21 A. Well, pH is one of the factors of
22 corrosion or a good, I guess, indicator of it.
23 It's one the parameters that was used in the
24 Langelier index calculations.

1 Q. And THM was a contaminant in the
2 water you're trying to deal with, right?

3 A. Correct. Yes.

4 Q. Now, Mr. Gnagy's notes, they
5 include various measures of the parameters for
6 certain chemical elements or compounds as of
7 December 14 and August 14 for both raw and tap
8 water.

9 Do you see that?

10 A. I do, yes.

11 Q. And you see the last two are
12 chlorine -- that's chlorine? That's not
13 chlorides, is it?

14 A. That's actually going to be
15 chloride in this context.

16 Q. Oh, so that's chloride and
17 sulfate?

18 A. Yes.

19 Q. So there you have what you need to
20 divide chloride by sulfate, right?

21 A. Correct. Yes.

22 Q. So if you divided 80 by 24 for the
23 tap measure as of December 14, you would see
24 that the ratio is over 3, right?

1 A. Correct. Yes.

2 Q. And you would see that as of
3 August, it was -- if that's a 10, over 6 to 1.
4 It's an 18, it was over 3 to 1, right?

5 A. Correct. Yes.

6 Q. And then there's listed down here
7 three different calculations. A CCPP. Do you
8 know some calculation called a CCPP?

9 A. I'm not familiar with that, no.

10 Q. And LI, that's a Langelier index,
11 right?

12 A. That's what I would assume here,
13 yes.

14 Q. And the Langelier index, that was
15 a metric that you did conduct periodically,
16 right?

17 A. Correct. Yes.

18 Q. And you understand that the EPA
19 has said that the Langelier index has no
20 value -- and that's a direct quote -- no value
21 in measuring corrosivity?

22 MR. MARKER: Objection.

23 MR. KIM: Objection to form.

24 A. I will say I learned that later

1 on.

2 Q. So you know that now?

3 A. Correct.

4 Q. And you would have expected the
5 experts you brought in to know more about it
6 then, right?

7 A. I would, yes.

8 Q. And one calculation you do not see
9 on this page is a CSMR calculation, correct?

10 A. That is correct.

11 Q. So Mr. Gnagy, he had this data,
12 right?

13 A. Yes.

14 Q. Did he ever tell you he had done a
15 CSMR calculation as of February --

16 MR. CAMPBELL: Object to the form.

17 Q. -- '15?

18 A. No, he did not.

19 Q. But if he had looked at his data
20 on his own notes, he could have seen that your
21 water was corrosive, right?

22 A. According to the CSMR, he could
23 have, yes.

24 Q. I mean, highly corrosive, right?

1 MR. MARKER: Objection.

2 A. It was a pretty high number for
3 CSMR.

4 Q. That is a very high number for
5 CSMR, isn't it?

6 A. It is.

7 Q. After this set of notes that
8 Mr. Gnagy put together, Veolia made a series of
9 presentations to the city, right?

10 A. Correct. Yes.

11 Q. Did you attend any in-person
12 meeting when Veolia came and summarized the
13 results to a bunch of folks?

14 A. I don't recall attending any
15 meeting like that. If I did, it would have been
16 a public meeting where the public was allowed
17 to, but I don't recall if there was a --

18 Q. All right. I was going to ask you
19 about one other public meeting. The day that
20 the switch was made, April 26, 2014, was anyone
21 from LAN there?

22 A. I guess I can't really recall a
23 public meeting on that day.

24 Q. And there was kind of a big

1 celebration where the mayor actually pushed the
2 button.

3 Do you remember that?

4 A. I do vaguely remember that.

5 Q. Do you remember if anyone from LAN
6 was there?

7 A. I couldn't tell you because I
8 really wasn't around myself.

9 Q. We'll have to ask them when we get
10 a chance.

11 But sticking with Mr. Gnagy and
12 Veolia. Veolia never told you, "Your water" --
13 well, let's see.

14 Right now you're running the water
15 district, right?

16 A. Yes.

17 Q. If you got reports like this of
18 corrosion levels in your water, you'd be
19 concerned, right?

20 MR. MARKER: Objection; form.

21 A. I would, yes.

22 Q. Why?

23 A. Potential problems and issues.

24 Q. What kind of issues?

1 MR. MARKER: Objection; form.

2 A. Could be, number one, thinking of
3 damage to the infrastructure and, number two,
4 you know, public health in that aspect.

5 Q. All right. Now, you never saw
6 anything from Veolia where they told you,
7 "Flint, your water is highly corrosive. This
8 could damage your infrastructure and impact
9 public health." Did you?

10 A. No, I did not.

11 Q. And Veolia could have told you
12 that by dividing one number by another on this
13 single page of notes that Mr. Gnagy had,
14 correct?

15 A. Yes, they could have told us about
16 the CSMR numbers.

17 MR. MORRISSEY: Let's take a
18 little break. I have a few more
19 questions left.

20 THE VIDEOGRAPHER: We are going
21 off the record at 2:52 p.m.

22 (Recess taken.)

23 THE VIDEOGRAPHER: We're back on
24 the record at 3:09 p.m.

1 - - -

2 (Glasgow Deposition Exhibits 77,
3 78, and 79 marked.)

4 - - -

5 BY MR. MORRISSEY:

6 Q. Mr. Glasgow, what I've marked as
7 Exhibits 77, 78, and 79 are three different
8 reports prepared by Veolia in the spring of
9 2015. I think you were asked about one of these
10 yesterday. You said you first saw one of the
11 Veolia reports, it was approaching summer of
12 2015; is that right?

13 A. That is correct, yes.

14 Q. Do you know -- May, June,
15 approaching summer?

16 A. Yeah, it was probably approaching
17 summer. Like I said, I had to continually keep
18 asking my supervisors for a copy of their
19 report.

20 Q. But you knew throughout the spring
21 that Veolia had been there, they'd made a set of
22 recommendations, and that you had made some
23 changes to your operations based on what they
24 advised, right?

1 A. Correct. Yes.

2 Q. And did you ultimately review the
3 various reports that Veolia provided?

4 A. I'm looking at the ones in front
5 of me here. I'll say the one I recall seeing
6 early summer of '15 was Exhibit Number 78.

7 Q. Okay.

8 MS. COLLINS: Can you tell us what
9 that is?

10 MR. MORRISSEY: That is the
11 March 12, 2015 report, Bates-numbered
12 COF_FED_628049.

13 BY MR. MORRISSEY:

14 Q. One more question back on
15 Mr. Gnagy and his being there. We talked about
16 Ms. Walters' lead tests and whether you had
17 withheld any lead results from Mr. Gnagy.

18 Do you recall there being lead
19 tests at the University of Michigan-Flint that
20 were high in the same time frame that Veolia was
21 there?

22 A. I do recall talking with Mr. Lang.
23 He was from the University of Michigan-Flint,
24 and I do -- I do recall having conversations

1 with him in regards to them doing some of their
2 own testing. And there was some elevated lead.
3 A time frame, I can't put on that, no.

4 Q. Okay. And the university is on
5 the water system, right?

6 A. Correct. Yes.

7 Q. And I asked you Ms. Walters'
8 results. You didn't hide any results from
9 Veolia regarding the university either, did you?

10 A. No, I didn't hide results in
11 regards to anything.

12 Q. Okay. And do you recall anything
13 about Veolia suggesting to the city that you
14 didn't necessarily need to worry about these
15 results at the University of Michigan-Flint?

16 MR. CAMPBELL: Object to the form.

17 A. I do not recall.

18 Q. Did anyone at Veolia ever suggest
19 to you that these higher results at the
20 University of Flint might be a problem?

21 A. I do not recall that, no.

22 Q. Did you ever learn that there was
23 a report up to executives within Veolia that
24 lead might be a problem based on those results?

1 A. I did not, no.

2 Q. Did anyone -- no one from Veolia
3 ever said, "Look, this issue with elevated lead
4 at the University of Michigan-Flint might be an
5 indicator of there being problems. You should
6 look into this further"?

7 MR. CAMPBELL: Object to the form.

8 A. Not that I recall, no.

9 Q. And you were asked a bit earlier
10 about the corrosivity of the water -- about
11 corrosive water impacting cars at the GM plant;
12 is that right?

13 A. That is correct, yes.

14 Q. And what was happening is they
15 used water as part of the process for the -- is
16 it paint plant?

17 A. It was -- I think it was their
18 metal fab plant, if I recall. I'm trying to
19 think. Yeah, one of their plants. They had a
20 section in Flint there, there's three plants
21 right there; an engine plant, a metal fab plant,
22 and the truck and bus plant.

23 Q. And GM had concluded that they
24 didn't want to use the water anymore because it

1 was corroding cars?

2 A. Yeah, it was pitting some of their
3 metal on parts of the cars.

4 Q. Did anyone from Veolia or LAN,
5 your outside engineering experts, say, "Look, we
6 might want to look further into corrosion in the
7 drinking water because GM's concerned that this
8 water is corroding cars"?

9 MR. CAMPBELL: Object to the form.

10 A. Not that I recall, no.

11 Q. I mean, in hindsight, doesn't it
12 stand to reason that water that's corroding cars
13 is probably not something you want to drink?

14 MR. CAMPBELL: Object to the form.

15 A. I would have to agree with that.

16 Q. But none of these multimillion
17 dollar experts from LAN flagged the issue at the
18 time, right?

19 MR. GAMBLE: Objection; form.

20 A. No, not that I can recall.

21 Q. And none of the world leading
22 water expert gurus like Mr. Gnagy flagged the
23 issue at the time?

24 MR. CAMPBELL: Object to the form.

1 A. No.

2 Q. Now, back to these reports. The
3 March 4th report, 77, the second paragraph under
4 assignment, it says, "The report will provide
5 the findings requested by the city in regards to
6 the operation of the water plant, distribution
7 system, customer service, and communication,
8 capital plans, and actions, as well as budget."

9 Do you see that?

10 A. Yes.

11 Q. Are you aware of anything limiting
12 the scope of Veolia's work such that it was not
13 considering some aspects of your plant or
14 distribution system even though it had said it
15 was in its report?

16 MR. CAMPBELL: Object to the form.

17 A. No, I'm not aware.

18 Q. The next sentence says, "The
19 urgency of the water quality problems and
20 intense public interest make it important to
21 remind the city the scope involved a one week
22 assessment of the situation by four people."

23 Do you see that?

24 A. Yes.

1 Q. So these folks were actually
2 physically in your plant for some period of
3 time, about a week, right?

4 A. Correct. Yes.

5 Q. And then they had some period of
6 time to prepare reports based on their work,
7 right?

8 A. Correct. Yes.

9 Q. This urgency of the situation, was
10 there some urgency about the water even by early
11 2015 when Veolia was called in?

12 A. I would say there was an urgency
13 due to the -- I would think it was kind of the
14 public perception on the issues the public was
15 dealing with.

16 Q. And people were kind of up in arms
17 generally about the water by this point?

18 A. Yes, and they were losing trust in
19 their local government I'll say.

20 Q. Yeah. And you brought in these
21 outside experts from Veolia, this global firm
22 with expertise in these issues, to help you try
23 to solve the problem, right?

24 A. Yes. To my knowledge, yes.

1 Q. If you turn to page 5 of this
2 March 4th report under "Veolia Recommendations."
3 It's about one, two, three, four, five, six --
4 seven bullet points down from the top set of the
5 recommendations they are making.

6 There's a paragraph on corrosion
7 control.

8 Do you see that?

9 A. Yes, I do.

10 Q. And in the third sentence of that
11 paragraph, it reads, "Many people are frustrated
12 and naturally concerned by the discoloration of
13 the water with what primarily appears to be iron
14 from the old unlined cast iron pipes."

15 Do you see that?

16 A. Yes.

17 Q. "The water system can add a
18 polyphosphate to the water as a way to minimize
19 the amount of discolored water but not make it
20 go away."

21 Do you see that?

22 A. I do.

23 Q. So one benefit of adding
24 polyphosphates is it could make the water

1 clearer by mitigating the release of iron in the
2 distribution system, right?

3 A. Correct. Yes.

4 Q. And that's one benefit. Another
5 benefit of having corrosion control is that you
6 could mitigate the release of lead and stop
7 poisoning people, right?

8 MR. MARKER: Objection; form.

9 A. I would agree and say yes.

10 Q. And that benefit of corrosion
11 control in not poisoning people was not
12 mentioned here, right?

13 A. It was not.

14 Q. Do you recall anyone from Veolia
15 ever mentioning that one of the benefits of
16 adding a corrosion control was that you would
17 not poison people?

18 MR. CAMPBELL: Object to the form.

19 A. I do not, no.

20 Q. This paragraph suggested that you
21 could add a polyphosphate, right?

22 A. Correct. Yes.

23 Q. And you ultimately added an
24 orthophosphate, not a polyphosphate, right?

1 A. Correct.

2 Q. And the reason you did that is
3 because polyphosphates actually exacerbate
4 corrosion in a water distribution system with
5 lead pipes, doesn't it?

6 MR. MARKER: Objection; form,
7 foundation.

8 A. To be honest, I wasn't aware of
9 that.

10 Q. So to this day, you're not aware
11 that orthophosphates are the preferred corrosion
12 control mechanism for water distribution systems
13 with lead pipes?

14 MR. CAMPBELL: Objection to form.

15 A. I will say that was -- that is
16 what I've been familiar with in my tenure in
17 this profession, is the orthophosphate.

18 Q. Okay. No one from Veolia ever
19 said there was an urgent need to implement
20 corrosion control to protect public health in
21 Flint, correct?

22 A. No, not that I can recall.

23 MR. CAMPBELL: Object to the form.

24 Q. One idea that came up from time to

1 time of addressing the various problems with the
2 water was switching back to Detroit, right?

3 A. Correct. As time went on in '15,
4 that became a topic.

5 Q. And you ultimately did it, right?

6 A. Yes, the city did make that
7 decision.

8 Q. And even early on, February, March
9 time frame, there was, like, a city council
10 meeting and a big public outcry about possibly
11 switching back to Detroit.

12 Do you recall that?

13 A. I do recall that.

14 Q. Did anyone from LAN or Veolia ever
15 tell you the best technical way to address these
16 problems right here right now would be a switch
17 back to Detroit?

18 MR. CAMPBELL: Object to the form.

19 A. Not that I can recall, no.

20 Q. Exhibit 78. This is the report
21 you remember seeing, right?

22 A. Correct. Yes.

23 Q. Under -- in the third -- fourth
24 paragraph down, Veolia indicated, "This report

1 provides recommendations and a roadmap for
2 improvement, though our engagement was limited
3 in scope."

4 Do you see that?

5 A. Yes.

6 Q. And, again, you're not aware of
7 anything that excluded lead or public health or
8 impacts on the integrity of pipes from the scope
9 of Veolia's work, are you?

10 MR. CAMPBELL: Object to the form.

11 A. No.

12 Q. And then in the next paragraph, it
13 reads, "Although a review of water quality
14 records for the time period under our study
15 indicates compliance with state and federal
16 water quality regulations ..."

17 Do you see that?

18 A. Yes.

19 Q. Now, one thing you know now is
20 that the Safe Drinking Water Act requires an
21 optimal corrosion control treatment evaluation
22 when you're switching from one source to
23 another, right?

24 A. Correct. Yes.

1 Q. You suspected that was the case
2 back before the switch, right?

3 MR. MARKER: Objection; form.

4 A. Yes. I had an idea.

5 Q. That was what you thought the law
6 was, right?

7 A. That's how I understood it at the
8 time.

9 Q. But you went to Mr. Prysby and
10 Mr. Busch, and they said, "Nah, you don't need
11 to do that," right?

12 A. So to speak, yes.

13 Q. But no one from LAN said, "Those
14 guys at the state are all wet. You do need to
15 do this."

16 Right?

17 MR. GAMBLE: Objection; form.

18 A. No.

19 Q. And no one from Veolia when they
20 came in in early 2015 said, "That was a big
21 screw up. You should have done this evaluation
22 before making the switch, and the fact that you
23 didn't do it is a problem that could cause
24 public health concerns going forward."

1 Right?

2 MR. CAMPBELL: Object to the form.

3 A. Right. No.

4 Q. If you move forward in this
5 March 12 presentation, there's again on page 5
6 under "Corrosion Control" -- the only reference
7 to corrosion control -- this says "The water
8 system could add a polyphosphate to the water as
9 a way to minimize the amount of discolored
10 water."

11 Again, they didn't tell you that
12 you needed to have corrosion control, did they?

13 A. No.

14 MR. MARKER: Object to the form.

15 Q. They told you you could add a
16 polyphosphate. They didn't say anything about
17 orthophosphates, did they?

18 A. No.

19 Q. And they said it would minimize
20 discolored water. They didn't say it would have
21 anything to do with lead, did they?

22 A. They did not, no.

23 MR. CAMPBELL: Object to the form.

24 Q. And then Mr. -- or counsel for

1 Veolia yesterday walked through one of these
2 suggested next steps, which was in one of the
3 Tier 2 priority items, the third one down that
4 begins on the second page of "Recommended
5 Actions," on the page Bates-numbered 628060.
6 This says you could "Contract with your engineer
7 and initiate discussions with the state on the
8 addition of a corrosion control chemical."

9 Right?

10 A. Yes.

11 Q. And, again, it suggests
12 phosphates, right?

13 A. Yes.

14 Q. Doesn't specify ortho?

15 A. No. Just says phosphates.

16 Q. Doesn't say anything about lead,
17 right?

18 A. Right.

19 Q. And doesn't say this is something
20 you need to do immediately to protect public
21 health?

22 A. No, it does not.

23 Q. Then the next recommendation is to
24 increase ferric, right?

1 A. Yes.

2 Q. And that's something you all did
3 in the ensuing months, right?

4 MR. CAMPBELL: Object to the form.

5 A. Yeah, to -- not quite to the level
6 they were requesting, but yes.

7 Q. Right.

8 A. It was increased at the plant.

9 Q. From the summary that counsel for
10 the state showed you earlier, you could see
11 increasing from March when you got this report
12 to May and June increased by more than four
13 points, which is over 25 percent, right?

14 A. Correct. Yes.

15 Q. And the impact of adding ferric
16 chloride to the water is that it would increase
17 the amount of chlorides in the water, increase
18 the CSMR and increase corrosivity, right?

19 MR. MARKER: Objection; form.

20 A. Yes. It could, yes.

21 Q. The next Exhibit 79 is the
22 technical memorandum. This is -- it starts with
23 Bates number COF_FED_0016290. It's addressed to
24 Mr. Croft with a copy to Mr. Ambrose and others,

1 the folks from Veolia. It's dated March 30 of
2 2015.

3 The first sentence of the
4 memorandum begins, "Marvin Gnagy, professional
5 engineer, and Theping Chen, professional
6 engineer, conducted comprehensive evaluations of
7 the Flint water treatment plant operations and
8 chemical processes in February 2015 under a
9 consulting contract with Veolia North America."

10 Do you see that?

11 A. Yes.

12 Q. Now, did you see this memo?

13 A. I did not see this memo.

14 Q. This was -- your supervisors were
15 getting the input from their outside experts at
16 this point, right?

17 A. Correct. Yes.

18 Q. Now, looking back, isn't it clear
19 that Veolia didn't give you anything close to
20 the kind of warning you would have wanted about
21 the potential impacts of not having corrosion
22 controls in place?

23 MR. CAMPBELL: Object to the form.

24 A. I'm sorry. Could you restate

1 that?

2 Q. Sitting here today looking back,
3 isn't it clear that Veolia did not give you the
4 kind of warning you would have expected an
5 expert engineer to give about the impact of not
6 having corrosion control?

7 MR. CAMPBELL: Object to the form.

8 A. I can agree with that.

9 Q. And you sure would have
10 appreciated a stark warning that not having
11 corrosion control could cause lead poisoning
12 throughout the city, right?

13 MR. CAMPBELL: Object to the form.

14 A. Correct. I agree.

15 Q. You would have appreciated a clear
16 warning that not having corrosion control could
17 cause tens of millions of dollars in pipe damage
18 throughout the city, correct?

19 MR. CAMPBELL: Objection to form.

20 A. I agree, yes.

21 Q. If you had gotten that kind of
22 warning in any way, shape, or form, whether
23 orally or by a presentation, would you have done
24 anything with it?

1 MR. MARKER: Object to the form.

2 A. Yes, I would have.

3 Q. What would your normal practice
4 have been?

5 A. Normal practice would be to grab
6 my supervisors and have a frank discussion with
7 them about what needs to be done.

8 Q. Do you have Exhibit 19? Exhibit
9 19, which was previously marked with you over
10 the last couple days, is an October 1, 2015
11 letter from Joan Rose who's a professor at
12 Michigan State, right?

13 A. Correct. Yes.

14 Q. And you understand that Ms. Rose,
15 Professor Rose, is a professor in water
16 research, right?

17 A. Yes.

18 Q. And she was part of something
19 called a technical advisory committee, right?

20 A. Right. Correct.

21 Q. That was established sometime in
22 the spring of '15?

23 A. Yes.

24 Q. Now -- and that was like a set of

1 outside advisors that provided input on water
2 quality issues, right?

3 A. Correct. Yes.

4 Q. But they weren't the professional
5 engineers who had been hired by the city, right?

6 A. No. Not to my knowledge, no.

7 Q. And Professor Rose in her
8 letter -- this is October 2015. By this point,
9 there's obviously a big problem, right?

10 MR. MARKER: Objection to the
11 form.

12 A. Yes. There's definitely some
13 issues.

14 Q. Issues such that you by then
15 decided you needed to implement corrosion
16 control, right?

17 A. Correct.

18 Q. And you were about to tell people
19 to stop drinking the water, right?

20 MR. MARKER: Objection to the
21 form.

22 MR. CAMPBELL: Objection to form.

23 A. We were attempting to notify,
24 yeah, the residents of the issues.

1 Q. Okay. Now, in her letter,
2 Professor Rose refers to an e-mail that she had
3 written to Mr. Croft on January 22, 2015 where
4 she said, "I definitely think" -- this is on the
5 next to last page of the letter at the top.

6 "I definitely think more testing
7 for hardness, iron, TDS, E. coli, maybe lead,
8 from people who were having aesthetic issues is
9 needed."

10 Do you see that?

11 A. Yes.

12 Q. And this was an e-mail from the
13 professor in this January time frame, right?

14 A. Yes.

15 Q. At that time you had LAN sort of
16 on this multimillion dollar retainer, right?

17 MR. GAMBLE: Objection; form.

18 A. Correct. Yes.

19 Q. You had Veolia who then came on
20 the scene a couple weeks later, right?

21 A. Yes.

22 Q. And you were relying on those
23 engineers to tell you what you needed to do to
24 address the problems, not Professor Rose, right?

1 MR. GAMBLE: Objection; form.

2 A. Correct. Yes.

3 - - -

4 (Glasgow Deposition Exhibit 80 marked.)

5 - - -

6 BY MR. MORRISSEY:

7 Q. Exhibit 80 is a September 8, 2015
8 e-mail with the Bates number LAN_FLINT_0041213.
9 It's from Jeff Hansen at Leo A. Daly to
10 Mr. Croft, copies to you and others.

11 Do you see that?

12 A. Yes.

13 Q. And this is -- it then attaches a
14 status report dated September 4th. The list
15 says, "New Issues of Concern This Month:
16 Corrosion control."

17 Right?

18 A. Yes.

19 Q. And that's the time frame where
20 LAN began working on implementing a corrosion
21 control system, right?

22 A. Correct. Yes.

23 Q. When LAN and y'all started
24 thinking about corrosion control in the fall of

1 2015, did you come up with some new fangled
2 approach to the issue?

3 MR. GAMBLE: Objection; form.

4 A. No, not in my eyes.

5 Q. I mean, you installed an
6 orthophosphate base corrosion control system,
7 right?

8 A. Correct. Yes.

9 Q. And that's a technology that
10 existed for decades, right?

11 A. Correct. Yes.

12 Q. It's the very technology that your
13 city had been using up until 2014, right?

14 MR. MARKER: Objection to form.

15 MR. KIM: Objection to form.

16 A. It was in the water prior to 2014.

17 Q. And it's not something that costs
18 a ton, right?

19 A. No, not necessarily.

20 Q. And within a short period of time,
21 your outside engineers were able to come up with
22 a plan for implementing this new corrosion
23 control approach for the water treatment plant,
24 right?

1 A. Correct.

2 MR. MORRISSEY: Why don't we go
3 off the record, and I'll confer with my
4 colleagues.

5 THE VIDEOGRAPHER: We're going off
6 the record at 3:37 p.m.

7 (Recess taken.)

8 THE VIDEOGRAPHER: We're back on
9 the record at 3:45 p.m.

10 BY MR. MORRISSEY:

11 Q. Mr. Glasgow, yesterday there was
12 quite a bit of discussion about the fact that
13 Mr. Prysby and Mr. Busch had suggested that you
14 didn't need to do anything further about
15 corrosion control before making the switch.

16 Do you recall that?

17 A. I do, yes.

18 Q. And I think -- it even seemed to
19 me that there was an attempt to suggest that you
20 were kind of helpless and couldn't do anything
21 once they told you you didn't need to do
22 corrosion control.

23 And just so it's clear, you
24 weren't helpless, right?

1 MR. MARKER: Objection; form.

2 Q. You could have gotten -- you could
3 have gone to your engineers and said, "Do we
4 need corrosion control?" Right?

5 MR. CAMPBELL: Object to the form.

6 A. That possibility was there.

7 Q. And if your engineers had come to
8 you and said, "You really need corrosion control
9 before you flip that switch," you would have
10 listened to them, right?

11 MR. GAMBLE: Objection to form.

12 A. Yes.

13 Q. If your engineers had come to you
14 and said, "You need corrosion control to protect
15 the public health of this city and can't flip
16 that switch before you have it," you would have
17 not allowed that switch to go forward, would
18 you?

19 MR. CAMPBELL: Objection to form.

20 MR. MARKER: Objection to form.

21 A. I would have tried my best to not
22 let it occur or to get something in place.

23 Q. And you don't have any reason to
24 believe that if your engineers had come to you

1 either in 2014 before you made the switch or in
2 early 2015 when Veolia came on the scene and
3 said, "You really need corrosion control," and
4 you had then gone to the state and said, "We
5 want to implement corrosion control," that they
6 would have said no, do you?

7 A. No.

8 MR. KIM: Object to the form.

9 MR. GAMBLE: Object to the form.

10 - - -

11 (Glasgow Deposition Exhibit 81 marked.)

12 - - -

13 BY MR. MORRISSEY:

14 Q. What I've marked as Exhibit 81 --
15 which is the approval of the permit for the
16 corrosion control system that the city
17 implemented in the fall, right?

18 A. Yes.

19 Q. And when LAN and you worked
20 together to put together a corrosion control
21 system in the fall of 2015, you went to the
22 state and sought approval, right?

23 A. Correct. Yes.

24 Q. And that's just part of the

1 process for any corrosion control technology,
2 you need DEQ sign off, correct?

3 A. Yeah. Any change to your
4 treatment process you would want their signoff.

5 Q. And DEQ gave it to you, correct?

6 A. Correct.

7 Q. Are you aware of any circumstance
8 in which you asked the state to provide
9 additional corrosion control to protect the
10 people of Flint, and the state said no?

11 MR. MARKER: Objection; form.

12 A. No.

13 MR. MORRISSEY: I have no further
14 questions at this time, but I will
15 reserve the balance of my time for
16 potential recross.

17 THE VIDEOGRAPHER: We are going
18 off the record at 3:58 p.m.

19 (Pause in proceedings.)

20 THE VIDEOGRAPHER: We are back on
21 the record at 3:52 p.m.

22 - - -

23 EXAMINATION

24

1 BY MR. DAWSON:

2 Q. Good afternoon, Mr. Glasgow. My
3 name is Don Dawson. I'm an attorney who
4 represents some plaintiffs in this action, and I
5 have some questions for you.

6 If at any time my questions aren't
7 clear, let me know, and I'll be happy to start
8 over.

9 All right, sir?

10 A. Okay. Sounds good.

11 Q. Mr. Glasgow, my main inquiry is
12 going to be in the area of Legionella. So you
13 can kind of focus in, that's where I'm going
14 with you, okay?

15 A. Okay.

16 Q. As I understand your testimony, I
17 believe both yesterday and today, you did have
18 some experience with Legionella as far as
19 discussions with McLaren Hospital; is that
20 correct?

21 A. That is correct.

22 Q. You were also shown a series of
23 documents I believe by Ms. Smith who represents
24 McLaren concerning some documents prepared by

1 Ms. Johnson.

2 Do you recall those from the --
3 was it Michigan public health and services?

4 A. Yes.

5 Q. All right. Did I understand you
6 to say that when you went to go have these two
7 meetings with McLaren, they shared with you
8 their testing?

9 A. Yeah. They discussed some of
10 their testing that they had done.

11 Q. And when they shared with you
12 their testing, did they discuss with you the
13 findings of what they found when they tried to
14 do testing on the city water before it came into
15 their premises?

16 MS. SMITH: Objection; foundation.

17 A. I do recall an instance I think in
18 the first meeting with discussions of their
19 results, that the incoming water into their
20 hospital from the city was a point of testing.

21 Q. Sure.

22 - - -

23 (Glasgow Deposition Exhibit 72 marked.)

24 - - -

1 BY MR. DAWSON:

2 Q. If you need a minute to read
3 through that, it's not long. Let me know when
4 you're ready. Because we as Plaintiffs have
5 lots of time left. We don't have to worry about
6 going off the record.

7 MS. COLLINS: What's the Bates
8 number?

9 MR. DAWSON: There isn't one. We
10 used it last week with Mayor Walling,
11 too.

12 BY MR. DAWSON:

13 Q. Did you have a chance to see that
14 document?

15 A. I have, yes.

16 Q. First of all, do you remember a
17 fellow that you met with by the name of Henry
18 Lobb --

19 MS. SMITH: Objection; foundation.

20 Q. -- at McLaren?

21 A. I'd say that name is not familiar.

22 Q. All right. How about a fellow
23 named Rusty? Do you remember him as the person
24 as head of maintenance?

1 A. I do remember -- that name does
2 sound familiar, yes.

3 Q. Okay. So whoever you met with on
4 those two occasions, did any of those people
5 have this particular report here, Exhibit 72,
6 from December 23, 2014?

7 MS. SMITH: Objection; foundation.

8 A. Not that I'm aware of. It wasn't
9 presented to me.

10 Q. Wouldn't you have liked to have
11 had some testing telling you what the hospital
12 had found relative to your water that they
13 tested before it ever got inside their premises?

14 MS. SMITH: Objection; foundation.

15 A. Yes, that would have been nice.

16 Q. And you can see right here that --
17 "Current Recommendations," it says, "It seems
18 the supply water coming from the city of Flint
19 is not contributing to the Legionella issues at
20 McLaren."

21 Do you see that?

22 A. I do.

23 MS. SMITH: Objection. Can I have
24 a standing objection to this line of

1 questions about this document?

2 MR. DAWSON: Sure.

3 MS. SMITH: The witness had no
4 contact with McLaren after late
5 October 2014.

6 MR. DAWSON: Absolutely. Glad to
7 give it to you. Or anything else you
8 can think of later, you can put in.

9 MS. SMITH: Can you note that for
10 the record, please.

11 BY MR. DAWSON:

12 Q. So what I'm asking you, sir, is
13 you can see this is a testing company from the
14 letter, correct?

15 A. Correct. Yet.

16 Q. You can see that it's directed to
17 McLaren Hospital, correct?

18 A. Correct.

19 Q. And it's telling McLaren Hospital
20 that they've hired these people for their
21 opinion, and it's telling them that Legionella
22 wasn't a problem with the city water.

23 Do you see that?

24 A. I do, yes.

1 Q. But the next sentence does talk
2 about where the problem might be, doesn't it,
3 about within the hospital, internal to the
4 hospital system?

5 Do you see that?

6 A. I do, yes.

7 Q. Did you have discussions with
8 anybody at this McLaren facility when you went
9 out there twice to try and see if you could be
10 of assistance -- did you have any discussions
11 with them about where they found the Legionella
12 and what they were doing about it?

13 A. There was discussions on where
14 they found it. I don't remember the exact
15 locations. I know it was sporadic throughout
16 the hospital. You know, it might have been a
17 shower head on one floor and a sink in a room on
18 a different floor, but no particulars.

19 Q. Did they tell you they were having
20 patients actually getting sick with Legionella
21 in their facility?

22 A. I do not recall them telling me
23 that.

24 Q. They didn't share that with you?

1 MS. SMITH: Objection.

2 A. Not that I recall, no.

3 Q. Let me ask you this: When you
4 know that there's a possible safety [sic] to the
5 public in your job, you had to issue some sort
6 of warning, correct?

7 A. Correct. Yes.

8 Q. Do you ever remember, having
9 worked in Flint and so forth, that McLaren
10 Hospital ever issued any sort of warning to the
11 public that "You might not want to come to our
12 hospital because we've got a problem with
13 Legionella here"?

14 MS. SMITH: Objection; foundation.

15 A. I do not recall.

16 Q. And you remember Ms. Smith asked
17 you, "Well, wasn't it being hypothesized that
18 maybe it was the Flint water was the cause, not
19 anything else"?

20 Do you remember that?

21 A. I do, yes.

22 Q. Do you recall that there was a
23 press release that says McLaren Flint was the
24 primary source of Legionella outbreak?

1 Do you remember seeing that one?

2 MS. SMITH: Objection; foundation.

3 A. Yes, I do.

4 Q. And you remember reading that
5 where it blames McLaren as being the primary
6 source of the Legionnaires' outbreak; is that
7 right?

8 A. That is correct.

9 MS. SMITH: Objection; foundation.

10 Q. And you remember a while ago -- do
11 you still have Exhibit 149 there previous
12 from --

13 MR. MARKER: Was it marked?

14 MR. DAWSON: Yeah, it had the
15 sticker on it 149, I believe. Counsel
16 used it. Ms. Smith used it. It's the
17 one where I asked her to read the next
18 sentence down, and she didn't, for
19 completeness. It's talks about --

20 MR. MARKER: Yes, I do have that.

21 MR. DAWSON: -- they have no basis
22 to say that the Flint water is, in fact,
23 the cause of Legionella. She didn't
24 read that sentence.

1 BY MR. DAWSON:

2 Q. Do you remember that document,
3 sir?

4 A. Yes, I do.

5 Q. Turn to the second page of that
6 document. Or is it on the first page?

7 A. I don't see it on the first. It
8 looks like just --

9 Q. Okay. Is there a statement in
10 there about the issue of whether or not
11 Legionella was, in fact, caused by the city or
12 other people?

13 Is that Exhibit 149?

14 A. Yes, it is.

15 MR. MARKER: What he's asking you
16 to read is the portion that you didn't
17 get an opportunity to read earlier --

18 MR. DAWSON: Yeah. To put it in
19 context --

20 MR. MARKER: -- where it starts
21 with "unfortunately."

22 BY MR. DAWSON:

23 Q. In fairness, read the first
24 sentence above it, and then read the one that

1 you didn't get to read. And let's see if we can
2 make some sense of this statement.

3 Go ahead, sir.

4 A. Okay. The prior sentence there,
5 "Recalling that Legionella bacteria causes
6 disease generally when it is present in water
7 that becomes aerosolized and ultimately inhaled,
8 the fact that this increase in diagnosed cases
9 seems to overlay with the change in Flint water
10 municipal supply (from Detroit to the Flint
11 River) is concerning."

12 The next sentence starts as,
13 "Unfortunately, we really don't have enough
14 information from follow up on these cases at the
15 LHD level to support an association or rule it
16 out."

17 Q. So that's a fair understanding of
18 what that exhibit is trying to say, not just the
19 one sentence, correct?

20 MS. SMITH: Objection; foundation.

21 A. Correct. That would be my
22 understanding.

23 Q. And that Exhibit 149, who is it
24 to? What is it a memo of, sir?

1 A. It is to Susan Moran, DCH -- oh,
2 I'm sorry. I'm sorry. It is still to Susan
3 Moran from Jim Collins. Both from DCH.

4 Q. Now, you had never -- had you ever
5 seen this document before you were shown it
6 today?

7 A. No, I had never seen it before.

8 Q. But without even seeing it, you
9 were asked to be reading from it by Ms. Smith,
10 correct?

11 A. Correct.

12 Q. But you didn't get to read the
13 second sentence, which kind of says that you
14 weren't at fault, right?

15 MS. SMITH: Objection; foundation.

16 A. Yes. In a sense, I will say it
17 didn't have enough information.

18 Q. Do you understand that McLaren has
19 filed pleadings where they are claiming that the
20 city of Flint was the cause of their Legionella
21 problem rather than their own negligence?

22 Are you aware of that?

23 A. I am aware of that.

24 Q. How do you feel about that when

1 you know that they, in fact, had Legionella all
2 through their system?

3 MS. SMITH: Objection; foundation.

4 A. To me, it's disheartening being a
5 former employee of the city of Flint water
6 system.

7 Q. How about would it be more
8 disheartening if you knew that these people that
9 are blaming you actually had engineering
10 controls in place for Legionella since 2004?

11 Did they ever tell you that?

12 A. No, I was not aware of that.

13 Q. Did they ever tell you they had
14 chlorinization systems in place at their
15 hospital prior to any of this Legionella
16 outbreak because they knew they needed to have
17 chlorinization to the water that they had come
18 into their hospital to prevent Legionella?

19 MS. SMITH: Objection; foundation.

20 A. I was not aware of that. At one
21 of the meetings, they did make me aware that
22 they had the ability to chlorinate their system.
23 I didn't know what the setup was or how they
24 instituted it.

1 Q. You were at the facility, correct?

2 A. Correct. Yes.

3 Q. They didn't say, "Well, listen.

4 You're kind of a mechanical guy. Would you like
5 to come out and see what our system is and how
6 we treat it"?

7 A. No, they did not.

8 Q. And there was another person there
9 I believe you said was from another state
10 agency, correct?

11 A. Correct. Yes.

12 Q. Who was that?

13 A. I believe it was Mr. Jim Henry
14 from Genesee County Health Department.

15 Q. And did they offer to Mr. Henry
16 for him to go out and look at the system they
17 had in place?

18 MS. SMITH: Objection; foundation.

19 A. Not that I recall, no.

20 Q. Did they tell you that they were
21 going to update and make their equipment better
22 to prevent Legionella from infecting their
23 patients?

24 Did they give you that

1 information?

2 MS. SMITH: Objection; foundation.

3 A. They did not.

4 Q. Did you know that, in fact, that
5 either after or before they met with you, they,
6 in fact, had gone out and upgraded their system
7 so that they would be less likely to infect
8 their patients with Legionella?

9 MS. SMITH: Objection; foundation.

10 A. They did not.

11 Q. And did they tell you that they
12 had people that would check their water sources
13 and test them weekly?

14 Did they tell you that?

15 MS. SMITH: Objection.

16 Time frame, please.

17 A. They did not tell me about the
18 frequency --

19 Q. During the time that you met with
20 the people, did they tell you that they were
21 doing that?

22 A. They did not, no.

23 MS. SMITH: Objection. Is
24 there -- could you read back the

1 question, ma'am?

2 (Record read back as follows:

3 "Question: During the time that you
4 met with the people, did they tell
5 you that they were doing that?")

6 A. No, they did not.

7 MS. SMITH: Did they tell you
8 about what and when?

9 MR. DAWSON: You get to ask all
10 that when it's your turn.

11 MS. SMITH: Well, then I --

12 MR. DAWSON: You can object.

13 MS. SMITH: I object to the
14 question.

15 BY MR. DAWSON:

16 Q. Just for Ms. Smith's edification,
17 did they tell you from McLaren that they, in
18 fact, did weekly tests of their water after they
19 received it from the city to determine if they
20 had any problems with bacteria in their water?

21 A. They did not, no.

22 Q. Did they tell you how the
23 chlorinization system was set up such that it
24 would shoot through the water to help guard

1 against any sort of bacterial problems at their
2 hospital?

3 A. They did not.

4 Q. And did they lead you to believe
5 that they didn't know anything about Legionella
6 before you met with them? They were just
7 innocent babes in the woods not knowing that
8 Legionella existed and was a risk at their
9 hospital?

10 MS. SMITH: Objection to form.

11 A. With my meeting with them, it
12 appeared that the problem had just -- just
13 arisen.

14 Q. And that they knew nothing about
15 it, right?

16 A. In a sense. It was limited
17 information that I was given.

18 Q. And did you -- was a person there
19 named Julie -- what's her -- Borowski. Was
20 Julie Borowski there from their risk management?

21 A. I can't tell you that I remember
22 the names of who was there. There was a number
23 of individuals from McLaren there.

24 Q. And do you recall any of those

1 individuals that told you that they were aware
2 that they needed to be safe relative to their
3 water towers, that they knew about that?

4 Did they tell you that?

5 A. Not that I recall, no.

6 Q. So if we do know of any testing of
7 Flint water during the time it was from the
8 Flint River -- we had the two tests I showed you
9 in Exhibit 72, right? Is that correct?

10 A. Correct.

11 Q. And then we have all the weekly or
12 daily tests you did with the other type of
13 testing mechanism to tell you whether or not you
14 had problems with bacteria that could lead to
15 Legionella, correct?

16 A. Correct. Yes.

17 Q. And for all those tests for as
18 long as they went on, you're aware of nothing
19 that alarmed you into believing that Legionella
20 was a problem; is that correct?

21 MS. SMITH: Objection; foundation.

22 A. Yeah. All the samples leaving our
23 plant never led me to that issue of Legionella.

24 Q. And if you got a sample that was

1 outside the norm, what would you do to address
2 it, sir?

3 A. Usually we would retest the next
4 day. If there was an issue with testing, like,
5 say, chlorine was low, we might flush hydrants
6 to try to get fresher water with higher chlorine
7 to the area.

8 Q. Okay. And do you have any recall
9 that you ever had to do that, sir?

10 A. On a few occasions, yes.

11 Q. But you then would do it and you
12 would test it again to make sure the water was
13 safe; is that correct?

14 A. Correct. Yes.

15 Q. You people at Flint weren't just
16 putting water out there and not caring whether
17 or not it had bacterial infection, did you?

18 A. A lot of the headlines read that
19 way, but that was not the mentality of my staff
20 or myself.

21 - - -

22 (Glasgow Deposition Exhibit 82 marked.)

23 - - -

24 MR. DAWSON: This is from the CDC.

1 And by the way, I e-mailed all these to
2 everybody, so you should have them.

3 MR. CAMPBELL: You didn't carry
4 them?

5 MR. DAWSON: No, sir. I just --
6 as old as I am, I even knew about
7 e-mail, Dick. That's pretty scary,
8 isn't it?

9 MS. SMITH: Can I just have a
10 standing objection to the CDC documents.
11 The witness has testified he's never
12 interacted with the CDC in any way about
13 Flint water.

14 MR. DAWSON: Sure.

15 MS. SMITH: And never would have
16 seen these documents.

17 BY MR. DAWSON:

18 Q. Do you want to take a moment and
19 look at that, would you, please, sir.

20 A. Sure.

21 Q. And the area where I want to ask
22 you is about the portion that says "Overview of
23 McLaren Hospital outbreak."

24 Do you see that?

1 A. Yes, I do. Yep.

2 Q. Now, this document talks about the
3 McLaren Hospital --

4 MS. SMITH: Is there a time frame
5 for this document, sir?

6 MR. DAWSON: What did you say?

7 MS. SMITH: Is there a time frame
8 for this document?

9 MR. DAWSON: I don't know. It's
10 from the CDC, and I e-mailed you these
11 documents.

12 MS. SMITH: That's not my
13 question.

14 MR. DAWSON: No, I don't have a
15 date on here. Sorry.

16 MS. SMITH: All right. I'm going
17 to object to foundation.

18 MR. DAWSON: Very good.

19 BY MR. DAWSON:

20 Q. In any event, where it says an
21 outbreak -- maybe McLaren had more than one
22 outbreak of Legionella, so maybe this is another
23 time, I guess, counsel is suggesting.

24 But as far as I know, there's only

1 one major outbreak concerning --

2 MS. SMITH: Objection. That's an
3 improper question, sir.

4 BY MR. DAWSON:

5 Q. Do you see the part where it says
6 "Cooling tower tested negative in October"?

7 A. I do, yes.

8 Q. And October, because they claim
9 that the outbreak was over in March of '15 --

10 MS. SMITH: Objection.

11 Q. -- that logically would be
12 October of '14, correct?

13 A. That would be my take on it, yes.

14 Q. Did McLaren tell you that they had
15 done cooling tower testing when you met with
16 them in October and November of 2014?

17 A. Not that I can recall.

18 Q. And then you say, "Legionella was
19 found in the potable water in October," and then
20 it puts parens "hyperchlorinated."

21 Do you see that?

22 MS. SMITH: Objection; vague as to
23 time frame.

24 A. Yes.

1 Q. And the hyperchlorinated --
2 remember I told you they had that system?

3 A. Yes.

4 Q. The first time you heard of it is
5 today when I told you about it?

6 A. Yes.

7 Q. Then it says, "Water sampled
8 coming in from municipal water was found to be
9 negative." That sounds just like what we heard
10 in Exhibit 72, correct?

11 A. Correct.

12 Q. This is something obviously that
13 someone found out that McLaren had done,
14 correct?

15 A. Correct.

16 Q. Then it says, "Water circulating
17 the hospital had Legionella."

18 That's inside the hospital, right?

19 A. That would be my understanding,
20 yes.

21 Q. Just like what we see in Exhibit
22 72 from their own testing, correct?

23 A. Correct.

24 Q. Then it says, "Private lab was

1 hired for testing - name unknown." Well, we
2 know their name now, don't we, from Exhibit 72.
3 It's called Environmental Testing and
4 Consulting, Inc.?

5 A. Correct. Yes.

6 Q. "No additional treatment after
7 October is known."

8 You don't know what that means, do
9 you, sir?

10 A. I do not.

11 Q. All right. And then it says, "The
12 specific nature of the exposure of the March
13 McLaren case is unknown."

14 Do you know anything about that,
15 sir?

16 A. I do not.

17 Q. All right. But you do see some
18 documents that leads you to believe that McLaren
19 had a problem with Legionella in their water in
20 the hospital; is that correct, sir?

21 MS. SMITH: Objection;
22 characterized a problem.

23 A. Yes. From these documents, yes.

24 Q. She wants us to define the

1 problem.

2 Would you agree that if you can
3 expose the patient to something as deadly as
4 Legionella, that that's a problem?

5 A. It would seem to me, yes.

6 Q. Now, did you learn at any time
7 during your work with Legionella that if you or
8 I drank a glass of Legionella, as long as it's
9 not atomized, it's not going to hurt you?

10 A. Correct. Yes, I do understand
11 that.

12 Q. But you understood that if it
13 became a mist, then if you suck it into your
14 lungs and you're compromised, things can happen
15 to you?

16 A. Yes.

17 MS. SMITH: Objection; foundation.

18 The witness has testified he's not an
19 expert on Legionella.

20 - - -

21 (Glasgow Deposition Exhibit 83 marked.)

22 - - -

23 BY MR. DAWSON:

24 Q. Take a moment and look at

1 Exhibit 83. This has got a last updated date of
2 January 28, 2016. It's got a big old red note
3 that says "Not for distribution or posting
4 online."

5 Have you seen this document
6 before, sir?

7 A. I have not.

8 Q. All right. Had you -- during the
9 time that you worked at Flint and this
10 Legionella was an issue, did you learn that
11 there was a number of reported cases, as many as
12 87?

13 A. I didn't remember the exact
14 number. I knew it was a significant number.

15 Q. All right. And did you learn that
16 the hospital, McLaren Hospital, was highly
17 over-involved compared to other facilities in
18 places where Legionella was found in Genesee
19 County?

20 A. I don't recall fully. I know in
21 some discussions with members from the Genesee
22 County Health Department, that McLaren was
23 somewhat of a red flag for them.

24 Q. All right. And then you see this

1 note right here that I'm pointing to on the
2 Elmo?

3 A. Okay. Yes.

4 Q. It says, "Healthcare facilities
5 associated with cases have since implemented
6 multiple environmental and procedural measures
7 to alleviate the situation."

8 Do you see that?

9 A. I do see that.

10 Q. But you didn't know about any of
11 those; is that correct?

12 A. That is correct.

13 - - -

14 (Glasgow Deposition Exhibit 84 marked.)

15 - - -

16 BY MR. DAWSON:

17 Q. I'll show you Exhibit 84. The
18 date is January 16, 2016. And it says, "CDC's
19 Legionnaires' disease and environmental health
20 experts are aware of and consulting with state
21 and local health departments in Michigan on the
22 increase in cases of Legionnaire's disease in
23 and around Flint."

24 You knew that activity was

1 ongoing; did you not?

2 A. I did.

3 Q. And it talks about here that of
4 the first 45 cases, the source of water as the
5 primary resident for the city of Flint was
6 47 percent; in other words, less than half,
7 correct?

8 A. Correct.

9 Q. And then when it talks about when
10 you're looking at community sources, more than
11 half the individuals had healthcare facility
12 exposure in the two weeks prior to their
13 illness.

14 Did you know that?

15 A. I was not aware of that.

16 Q. In other words, if you go into the
17 hospital, you can get it there. Did you
18 understand that?

19 A. I do understand that.

20 Q. And then it goes on to describe
21 what Legionella is.

22 Do you see that, sir?

23 A. Yes.

24 Q. And it says, "Each year an

1 estimated 8,000 to 18,000 people are
2 hospitalized with Legionnaires' disease in the
3 United States."

4 That's a lot of folks, right?

5 A. That's a significant number in my
6 eyes.

7 Q. And you could imagine as large a
8 facility as McLaren being open as long as they
9 had, this wasn't their exposure of Legionnaires,
10 correct?

11 MS. SMITH: Objection to
12 foundation.

13 Q. Would you agree with that, sir?

14 A. I would agree with that.

15 Q. Now, when you had discussions with
16 McLaren Hospital, did you ask these folks, "What
17 is it we can do for you relative to the problems
18 you are having with Legionella?"

19 Did that ever come up?

20 A. I believe it did, yes.

21 Q. And what did they ask or -- ask
22 you to do, if anything, sir?

23 A. They asked in regards to some of
24 our test results, if we've had any issues in the

1 system. In a sense, you know, to me it was they
2 didn't have an idea where their issues were
3 coming from, so they were attempting to look
4 everywhere to try to determine their causes.

5 Q. Okay. And did you tell them that
6 from everything that you had done and everything
7 that you knew about the water that you had sent
8 to them, you could not understand how it would
9 be a source of their Legionella?

10 A. Yes, I did attempt to explain that
11 and also shared some of my data with them.

12 Q. But they in turn didn't share the
13 data they had that said that your water wasn't a
14 problem, correct?

15 A. Correct.

16 Q. You were also asked a whole bunch
17 of questions -- I can't remember which document
18 it was earlier today. It's the one from
19 Mr. Kaplan. Do you still have that thing? It
20 was Exhibit 34.

21 A. I'm sure we have it.

22 Q. First of all, you had never seen
23 this document, but you were asked a bunch of
24 questions about it, correct?

1 A. Correct.

2 Q. And in this particular document,
3 you see the date is January 20 of 2016. How
4 long had you been back on Detroit water at that
5 point in time? About two months?

6 A. Yeah, two to three months at that
7 time.

8 Q. And so if there was less
9 chlorinization at the various areas where this
10 document is talking about, it wouldn't be from
11 the Flint River water, it would be from Detroit
12 water, correct?

13 A. At this time, correct. Yes.

14 Q. And this is water that Detroit is
15 sending to you saying, "Hey, it's just dandy,"
16 correct?

17 A. Correct.

18 Q. So this document that you were
19 asked a bunch of questions about has nothing to
20 do with the Flint River water; is that correct?

21 A. That is correct.

22 Q. Lastly, sir, would you agree that
23 it would be a good thing to have in a hospital
24 an engineering policy that says that when you

1 have "Environmental services, shall flush all
2 showers and faucets of all plumbing fixtures at
3 the time of routine cleaning. Faucets shall be
4 wiped with a disinfectant during the daily
5 cleaning. Aerators containing sediment that has
6 comprised [sic] the output and cannot be
7 properly cleaned shall be reported into
8 engineering for service."

9 Do you agree that's a good thing
10 to do?

11 A. I would agree, yes.

12 Q. "Cooling tower water management
13 should be treated for microbial growth using
14 approved chemical disinfectants."

15 Would you agree that's a pretty
16 good thing to do?

17 MS. SMITH: Objection; foundation.

18 A. I would agree, yes.

19 Q. And do you know that the president
20 and CEO of McLaren Hospital, at least at the
21 time of this particular engineering document
22 when it was released to their people, was a
23 fellow named Donald Kooy.

24 Did you ever hear of him?

1 K-o-o-y.

2 A. Never heard of him, no.

3 Q. Was he at any of your meetings,
4 sir?

5 A. Not that I can recall, no.

6 Q. And then they have one here, it
7 says, "Water systems shall be flushed with
8 chlorine or mono-chloramine on a minimum of
9 twice-a-year basis."

10 Did you know that they did that?

11 A. I was not aware of that.

12 Q. "During system flushing, bottled
13 waters and coolers of ice should be made
14 available to floors for patients and staff to
15 use."

16 Did you know that?

17 A. I did not.

18 Q. I just didn't want you to think I
19 was funning you about them having a chlorination
20 system prior to when they met with you, sir.

21 MR. DAWSON: Those are all the
22 questions I have. Thank you for putting
23 up with me.

24 THE VIDEOGRAPHER: We are going

1 off the record at 4:19 p.m.

2 (Recess taken.)

3 - - -

4 FURTHER EXAMINATION

5 BY MS. SMITH:

6 Q. All right, Mr. Glasgow. You
7 remember me. I'm Susan Smith. I represent
8 McLaren Flint Hospital.

9 Do you remember our conversation
10 yesterday and earlier today?

11 A. I do.

12 Q. Okay. And now I've just listened
13 to your testimony regarding your meetings with
14 McLaren Flint Hospital and what you learned
15 about what was happening at that hospital when
16 Mr. Dawson was questioning you, and I have a
17 couple follow-up questions.

18 First thing I want to do is show
19 you a document that's been previously marked as
20 Johnson Exhibit 142. And in particular, it's an
21 e-mail from Jerry Ambrose on October 3rd of 2014
22 wherein --

23 MR. MARKER: Has this been marked?

24 MS. SMITH: It's been marked as

1 Johnson 142.

2 MR. MARKER: Okay. Has it been
3 marked in this deposition?

4 MS. SMITH: No. We can go ahead
5 and mark it. I thought we were
6 attempting to not --

7 MR. MARKER: I don't have a copy
8 is what I'm saying.

9 MS. SMITH: Okay. I'm sorry. I
10 do not have a copy. I'll hand it over
11 when I read it to the witness.

12 BY MS. SMITH:

13 Q. And on October 3, 2014,
14 Mr. Ambrose wrote, among other places -- he
15 says, "After talking with Mike Glasgow from our
16 water plant, he confirmed that he was helping
17 the hospital conduct testing for bacteria. They
18 are flushing their water system with chlorine as
19 part of their routine method of abating these
20 types of issues."

21 If Mr. Ambrose wrote that he had
22 spoke to you on or about October 3, 2014, and
23 obtained that information about McLaren Flint
24 Hospital, was he correct in reporting what you

1 told him?

2 A. Yes. I would say yes.

3 Q. Okay. And I want to show you
4 Exhibit 109 from the Johnson deposition, which I
5 believe was previously marked today, which is
6 your November 3, 2014 update.

7 Now, you were careful when
8 reporting to your superiors to give accurate and
9 truthful information about your findings and
10 observations, correct?

11 A. Yes.

12 Q. Okay. And when you wrote on
13 November 3, 2014 to Ms. Murphy, Mr. Croft --
14 those are the folks that sent you to McLaren,
15 right?

16 A. Correct. Yes.

17 Q. And Mr. Johnson, he was one of
18 your supervisors, right?

19 A. Correct. Yes.

20 Q. As was Mr. Wright, correct?

21 A. Correct.

22 Q. Okay. So you're reporting to your
23 supervisors about an update on the McLaren
24 Legionella investigation. And you said on

1 October 30th, "I was invited back to McLaren for
2 a meeting."

3 So McLaren was asking you to come
4 back to their hospital to talk about this
5 Legionella investigation; is that right?

6 A. Yes.

7 Q. Okay. And a representative from
8 Genesee County Health Department was there. Was
9 that Mr. Henry?

10 A. From my recollection, yes.

11 Q. Okay. And do you have any
12 understanding as to why the Genesee County
13 Health Department was involved in the
14 investigation?

15 A. The only thing I understood was
16 that there had been an uptake of Legionella
17 infections, and that's why he was involved. It
18 was countywide, so to speak.

19 Q. Right. And so you understood
20 there were cases of infection from this
21 Legionella bacteria that the health department
22 was investigating, correct?

23 A. Correct. Yes.

24 Q. Okay. And the health department

1 was brought into this meeting at the hospital to
2 talk with you and others in the hospital about
3 this investigation.

4 What were your -- do you have any
5 understanding as to why Mr. Croft sent you to
6 this meeting?

7 A. I do not know. I originally
8 looked at it as kind of like a customer
9 complaint. In an issue, a lot of times they
10 would get ahold of me in the lab and send myself
11 out there. I couldn't tell you exactly why.

12 Q. So that's no different than
13 somebody like Ms. Walters contacting the water
14 department with a complaint and the water
15 department and a person such as yourself
16 responding as a courtesy to customers?

17 A. Correct. Yes.

18 Q. And you did sampling at
19 Ms. Walters' home because she had a concern
20 about her water quality, and you as part of
21 customer service at the water plant agreed to
22 help her investigate that to address her
23 concerns; is that right?

24 A. That's correct.

1 Q. And that's exactly what you were
2 doing at McLaren Flint Hospital, is you were
3 dispatched to help investigate a customer
4 complaint about water quality; isn't that
5 correct?

6 A. Yes. I would say that, yes.

7 Q. Okay. And you were provided an
8 update at this second meeting on or about
9 October 30th of 2014; is that right?

10 A. That sounds correct, yes.

11 Q. And it indicates in this e-mail of
12 November 3, 2014, "Since the original
13 investigation from two weeks ago, McLaren has
14 chlorinated their water system."

15 Does that accurately reflect
16 information you had learned in the second
17 meeting on or about October 30th of 2014?

18 A. Yes.

19 Q. And it goes on to indicate that
20 "McLaren conducted another round of Legionella
21 testing."

22 Is that information you obtained
23 from McLaren at the October 30th meeting?

24 A. Yes. That is something one of the

1 employees of McLaren said out loud in the
2 meeting.

3 Q. Okay. And as I understand it,
4 your testimony earlier when I was questioning
5 you said there was something McLaren didn't give
6 you, and that was the actual document that
7 reflected the test results from the October
8 testing?

9 A. Correct.

10 Q. But they shared the results with
11 you in the meeting? They told you what they --
12 what they showed?

13 A. Yes. They discussed some of the
14 testing results, yes.

15 Q. Okay. And after you left the
16 meeting on October 30th of 2014 or thereabouts,
17 did you do any follow-up inquiry to ask for the
18 test results from McLaren?

19 A. No, I did not. I assumed -- it
20 kind of sounded like when we left the meeting,
21 there would probably be another one in the
22 future.

23 Q. But there wasn't, right?

24 A. Not that I was -- if there was, I

1 wasn't invited, I'll say, I guess.

2 Q. Did you make any effort to
3 schedule a follow-up meeting with McLaren Flint?

4 A. I did not, no.

5 Q. Why not?

6 A. They originally had invited me --
7 we exchanged information. I gave them some
8 data. They discussed some of their data, and we
9 went on. At this time there was a lot of issues
10 that I was dealing with.

11 So I would say I wasn't really
12 going to be banging on their door every single
13 day to ask them for stuff. There was enough on
14 my plate, so to speak.

15 But if they -- if they wanted to
16 have another meeting, they said they would, you
17 know, contact everybody again. But I don't -- I
18 don't recall that ever occurring.

19 Q. So you didn't pursue any follow-up
20 meetings with the folks at McLaren, right?

21 A. No.

22 Q. And is it fair to say -- I
23 understand that you were dispatched to the folks
24 like Ms. Walters' home because you understood

1 water testing, and that's what she felt needed
2 to be done at her house, right?

3 A. Correct. Yes.

4 Q. And, similar, you were --
5 Mr. Croft sent you out to McLaren Flint because
6 they were talking about water testing. That's
7 something you know about, right?

8 A. Correct. Yes.

9 Q. And you're not a public health
10 official, and you don't under -- you don't work
11 in the public health department, and you don't
12 investigate infectious disease, fair statement?

13 A. That's a fair statement.

14 Q. And so part of your role with this
15 meeting at McLaren was to talk about water
16 testing because that's something you know a lot
17 about, fair?

18 A. That's fair, yes.

19 Q. Okay. And did you propose to
20 McLaren Flint, the folks you met with, that you
21 assist with any testing like you did at
22 Ms. Walters' home?

23 A. I did tell them that I could
24 assist with doing testing outside the hospital.

1 I said I would, you know, increase some of our
2 testing around the area.

3 But I admitted to them I didn't
4 have any testing to -- that was specific for
5 Legionella. And that's where I introduced them
6 to the HPC, the heterotrophic plate count, that
7 I did have available to me and what I would
8 attempt to do within my, I guess, limits or
9 abilities.

10 Q. So you explained some of the
11 testing methods that were available to
12 investigate this concern that they shared with
13 you about Legionella that they had found in
14 their hospital water; is that right?

15 A. Correct.

16 Q. And did you pursue any of the
17 testing that you described, the HP testing,
18 outside of the hospital?

19 A. Yes.

20 Q. And when was that conducted?

21 A. Oh, it wouldn't have been very
22 long after the meeting. It was very quick. I
23 can't remember if it was after the first or
24 after the second meeting.

1 But I do recall testing across the
2 street from the hospital or across Ballenger
3 Highway at St. Paul Lutheran Church and School.
4 They -- I went to them and asked them to allow
5 me to come inside. I was familiar with them.
6 Both my nieces had attended that school.

7 So they allowed me in to do
8 testing at their facility. I can't tell you the
9 exact date.

10 Q. That's fair.

11 A. But it wasn't long after the
12 meeting.

13 Q. Okay. Would there be a data sheet
14 that reflects the testing at the Saint Paul
15 Lutheran School?

16 A. Yes. There should, yes.

17 Q. Okay. Do you recall the results
18 offhand?

19 A. I know coliform bacteria was
20 negative. I can't remember the HPC or the
21 chlorine. So we would have taken the chlorine
22 sample, and then collected two separate samples,
23 one for the HPC and one for coliform bacteria.

24 Q. Now, did you share those results

1 with the folks at McLaren that you had met with?

2 A. As far as I know, I believe I did,
3 yes, along with some chlorine residuals
4 throughout the city.

5 Q. And how did you transmit that
6 information to the folks at McLaren?

7 A. That's what's making me think it
8 was after the first meeting, because I believe I
9 come to the second meeting with data for them.

10 Q. Okay. And so you shared
11 information about the testing in the
12 neighborhood. Did you take any action in
13 response to the test results that you did have?

14 A. Yeah. I don't recall taking any
15 action or that any was warranted from the
16 results.

17 Q. Okay. And now your area of
18 expertise here in this context is the water
19 testing and sampling that we've talked about and
20 the laboratory analysis of water samples, right?

21 A. Correct. Yes.

22 Q. And that's what you have this
23 license in from the state, the F1 license?

24 A. Correct. Yes.

1 Q. That focuses on testing water for
2 chemicals and microbiologicals and such,
3 correct?

4 A. Correct. Yes.

5 Q. Now, do you hold yourself out as
6 an expert on hospital water management?

7 A. I do not.

8 Q. And do you have any experience
9 implementing -- designing a hospital water
10 management program?

11 A. I do not.

12 Q. And do you have any expertise
13 implementing a hospital water management
14 program?

15 A. I do not.

16 Q. And do you have any expertise
17 analyzing building water systems to evaluate
18 water quality?

19 A. I do not, no.

20 Q. Okay. And we've established here
21 that Mr. Henry was at the meeting because of his
22 background in public health, and you agreed that
23 you're not a public health expert.

24 Do you have any education or

1 experience in investigating infectious disease?

2 A. I do not.

3 Q. And do you consider yourself an
4 expert on building engineering?

5 A. I do not.

6 Q. Have you ever been responsible for
7 the maintenance of a building water plumbing
8 system?

9 A. No, I have not.

10 Q. Have you ever done any testing of
11 a building water system to investigate
12 Legionella contamination?

13 A. I have not.

14 Q. Okay. So as I understand it, you
15 had this follow-up meeting with the folks at
16 McLaren on or about October 30th of 2014. I
17 understand around this time, you were a really
18 busy guy.

19 You told us that your employers
20 were sending you out to citizens' homes to do
21 testing because of staffing problems. You're
22 the laboratory supervisor, and you're being sent
23 out to the field to grab water samples at
24 people's homes, and that was because of the

1 staffing problems?

2 A. That was part of the issue, yes.

3 Q. Is it fair to say you had a full
4 plate around this time in October,
5 November 2014?

6 A. Yes, that is fair to say.

7 Q. Okay. So you didn't go back to
8 McLaren Flint Hospital, and you didn't seek a
9 follow-up meeting with them?

10 MR. MARKER: Objection; form,
11 foundation.

12 A. I did not.

13 Q. Okay. When you left the meeting
14 on or about October 30, 2014, you understood
15 based on your testing that you told us about
16 yesterday that's reflected in the MORs that
17 there was no evidence of Legionella in the water
18 coming into the hospital from the city's supply
19 during their -- strike that. Let me start
20 again.

21 Your report back to your
22 supervisors on November 3, 2014 indicates that
23 as of October 30th, "There has been no evidence
24 of Legionella in their water coming into the

1 hospital from the city supply during their
2 sampling events."

3 Now, that's based on information
4 that they provided to you at McLaren Flint
5 during your meetings there, right?

6 A. Yep. That is based on discussions
7 at the meetings.

8 Q. You'd have no other way of knowing
9 that there was no evidence of Legionella in the
10 water coming into the hospital from the city
11 supply during sampling events? That was the
12 only source of that information that you had at
13 the time right?

14 A. Correct. Yes.

15 Q. And you understood that the health
16 department and hospital were continuing to
17 investigate and reviewing cases. So you were
18 aware that there were cases of this infection.
19 You told us that, right?

20 A. Yes.

21 Q. And that wasn't kept a secret,
22 that there were people who were infected with
23 this Legionella bacteria?

24 A. No, I wouldn't say it was a

1 secret.

2 Q. And your report back to your
3 supervisors goes on to say that "The health
4 department was going to investigate the
5 locations of and the specific number of cases
6 diagnosed by Hurley Hospital and Genesys
7 Hospital since McLaren has only diagnosed about
8 one-third of the cases countywide."

9 Now, is that information that you
10 obtained from Mr. Henry?

11 A. I do not recall. Seeing that it
12 is in regards to the health department, I
13 would -- it would lead me to believe it was from
14 Mr. Henry.

15 Q. Okay. And did you have any
16 meetings with the folks at Hurley Hospital about
17 Legionella?

18 A. No.

19 Q. And how about the folks at Genesys
20 Hospital?

21 A. No.

22 Q. And just to be clear, you left the
23 employment of the city of Flint in April of
24 2016, so you have no knowledge of any test

1 results that might have been generated from
2 those facilities after April 2016, right?

3 A. Correct.

4 Q. Okay. And do you have any reason
5 to dispute the assertion in your report to your
6 supervisors that apparently, according to the
7 health department, Hurley and Genesys were also
8 diagnosing cases of this infection, and McLaren
9 had only diagnosed about a third of the cases
10 countywide?

11 MR. MARKER: Objection; form and
12 foundation.

13 A. I'm sorry. Could you restate
14 that?

15 Q. The question was simply, sitting
16 here today, do you have any reason to doubt what
17 you reported to your superiors here?

18 A. Oh, no, I do not.

19 Q. Okay. And you go on to explain
20 that based on the available data, there was no
21 correlation -- there was no data available to
22 establish a link between the increased cases of
23 Legionella infection and the municipal water
24 supply; is that about right?

1 A. That is correct, yes.

2 Q. And you then report to your
3 superiors, "The data we collect daily from the
4 water plant will continue to verify that there
5 is no evidence of Legionella in the treated
6 water leaving the water plant."

7 Now, that's based on the testing
8 that you've told us about that was the chlorine
9 and HPC testing for the regulatory monitoring
10 purposes; is that right?

11 A. That is correct, yes.

12 Q. Okay. And you go on to talk about
13 not being out of the woods.

14 Was it your intention here to help
15 McLaren with its investigation the same way you
16 helped Ms. Walters out with her concerns and her
17 investigation?

18 A. I can't say it's the same, because
19 they were kind of two different issues. It's
20 similar. We want to -- it's one of our
21 customers of the city of Flint, so we want to be
22 of help.

23 But my out-of-the-woods statement,
24 I had the feeling that there was so many

1 complaints about our water system at the time,
2 that any issues would be pinpointed to our
3 treatment and the use of utilizing the Flint
4 River as a source.

5 Q. Sir, is it fair to say that
6 McLaren Flint Hospital wasn't alone in looking
7 to the municipal water supply in October of 2014
8 as the source of health-related concerns?

9 A. I can agree with that.

10 Q. By that time, there were lots of
11 citizens in the city of Flint looking to the
12 water flowing through their taps and saying,
13 "This isn't right"?

14 MR. MARKER: Object to the form.

15 A. That's a fair statement.

16 Q. Okay. And you were very busy at
17 that time dealing with those customer complaints
18 and assisting customers with those
19 investigations, right?

20 MR. MARKER: Object to the form.

21 A. Yes.

22 Q. And the -- and between the last
23 meeting in late October 2014 and the end of your
24 employment with the city of Flint in April of

1 2016, did you speak to anybody at McLaren Flint
2 about Legionella or Legionnaires' disease?

3 A. I do not recall speaking to
4 anyone.

5 Q. Okay. We talked about Mr. Henry
6 at the Genesee County Health Department.
7 Sitting here today, do you recall any e-mail
8 communications with Mr. Henry about water
9 testing data that he was requesting?

10 A. I vaguely remember e-mail
11 conversations with him in regards to data. I
12 can't recollect. It seems like -- yeah, I would
13 be speculating, so I can't -- I think we had a
14 couple conversations via e-mail. What they were
15 about, I couldn't -- I couldn't tell you. I'm
16 sorry.

17 Q. Is it fair to say that Mr. Henry
18 shared the concerns of many citizens of Flint,
19 that the water quality was potentially the
20 source of some health-related issues --

21 MR. MARKER: Object to the form.

22 Q. -- in October 2014?

23 A. Yes, I could agree with that.

24 Q. Okay. I'm going to jump around a

1 little bit. And I'm sorry. I know it's the end
2 of the day. If you bear with me. If you don't
3 understand a question, please let me know.

4 But Mr. Dawson asked you about
5 warnings that were issued, and you as the water
6 treatment supervisor, the laboratory supervisor,
7 participated in issuing those boil water
8 advisories and other notices from the city of
9 Flint, right?

10 A. Correct. Yes.

11 Q. And you were asked about
12 whether -- and you issued those notices, and
13 those issues went out from the city of Flint
14 water treatment plant, boil water advisories, in
15 August and September of 2014 because they were
16 required by the law; isn't that right?

17 A. That is correct, yes.

18 Q. And that law was the Safe Drinking
19 Water Act, and that's the statute that governs
20 the operations of the Flint water treatment
21 plant, right?

22 A. That is correct, yes.

23 Q. And those notices were issued
24 because there's something called the Public

1 Notification Rule.

2 Do you know that rule?

3 A. Yes.

4 Q. And you actually -- you know that
5 that rule -- EPA issues a handbook that explains
6 what public water supplies are supposed to do
7 with notifying the public of hazards like those
8 boil water advisories, right?

9 A. Yes.

10 Q. And do you know if -- and you
11 issued those notices in conjunction with the
12 MDEQ, right?

13 A. Yes.

14 Q. You did them because the MDEQ told
15 you to, right?

16 A. Yes. I knew it was a requirement,
17 and we had sent copies to the state.

18 Q. All right. And when you went to
19 McLaren Flint and met with those folks at the
20 meetings in October 2014, you didn't participate
21 in any investigation of the history of that
22 facility, did you?

23 A. No, I did not.

24 Q. And you didn't engage in any

1 engineering investigation of what was happening
2 in that building in the pipes behind the walls,
3 did you?

4 A. No, I did not.

5 Q. And you didn't participate in any
6 analysis of past policies or other -- of past
7 policies that they might have had in place,
8 right?

9 A. Right.

10 Q. Okay. And -- just a moment.

11 And in addition to not
12 investigating the engineering history of McLaren
13 Flint Hospital, you didn't go into the history
14 of their infectious disease practices, did you?

15 A. No.

16 Q. And did you review records of past
17 infections that patients might have been
18 diagnosed with?

19 A. No.

20 Q. Did you review any medical records
21 of patients that had been at McLaren Flint
22 Hospital?

23 A. No.

24 Q. Did you examine any historic data

1 about the types of infections McLaren Flint
2 patients had been diagnosed with?

3 A. No.

4 Q. Do you have any basis for your
5 testimony that the Legionella cases diagnosed in
6 McLaren Flint patients in 2014 was probably not
7 their first case?

8 MR. MARKER: Objection to form.

9 A. Could you repeat that again? I'm
10 thinking too much.

11 Q. Let me put it this way, sir: Do
12 you have any knowledge that any patient in
13 McLaren Flint Hospital before the summer and
14 fall of 2014 had been diagnosed with
15 Legionnaires' disease?

16 A. I do not, no.

17 Q. Okay. So when Mr. Dawson asked
18 you about it probably wasn't their first case,
19 and you said, "Yeah, probably not," that was
20 just a guess, right?

21 MR. MARKER: Objection to form.

22 A. Well, in the sense we've known
23 about Legionella a while, but I did not have any
24 hard facts when I made that statement.

1 Q. Well, to be fair, Mr. Dawson
2 saying that CDC has reported that there's
3 somewhere between 8 and 18,000 cases of this
4 disease diagnosed each year, and so probably
5 McLaren had had an infection before in a
6 patient, that would apply to every hospital in
7 the country, right?

8 A. Correct. Yes.

9 Q. Okay. So that wasn't specific to
10 that facility, right?

11 A. Correct.

12 Q. Okay. And you were asked about
13 Mr. Kaplan, and my questions to you about
14 Mr. Kaplan -- and you remember talking to
15 Mr. Kaplan, right?

16 A. Yes.

17 Q. And Mr. Kaplan was part of the EPA
18 team that came into Flint in January of 2016
19 after it issued an emergency order addressed to
20 the city of Flint, the Michigan Department of
21 Environmental Quality and the state of Michigan.

22 Do you remember that?

23 A. I do, yes.

24 Q. And we talked about that emergency

1 order, and that emergency order included
2 specific orders to maintain chlorine residual in
3 the water system.

4 Do you remember that?

5 A. I do, yes.

6 Q. And that order was issued in
7 January of 2016, right?

8 A. Yes.

9 Q. And at that time, the city of
10 Flint was on the Detroit water system. They had
11 reconnected in October of 2015, right?

12 A. That is correct.

13 Q. And, nevertheless, the EPA comes
14 in and says, "We're issuing this order and we're
15 going to make you be sure that there's adequate
16 chlorine residual in that water system."

17 Right?

18 A. That is correct.

19 Q. Now, in the four months that you
20 were still in the employment of the city of
21 Flint, the January 2016 to April 2016, the four
22 months or so after this order was issued, you
23 were still in your position at the Flint water
24 treatment plant, right?

1 A. At that time I was the utilities
2 director.

3 Q. Utilities director?

4 A. Yeah. Mr. Johnson had retired and
5 left, and I got promoted, yes.

6 Q. And so you know that that Flint
7 water -- the water quality flowing through the
8 pipes of the distribution system didn't
9 instantaneously recover once they flipped the
10 switch back to Detroit, right?

11 A. Yes. Correct.

12 Q. And the water quality parameters
13 that existed in that four-month period,
14 January 2016 to April 2016, didn't
15 instantaneously return to the parameters that
16 existed before the switch in April 2014, right?

17 MR. MARKER: Form, foundation.

18 A. That is correct.

19 Q. It took quite a bit of time for
20 the water quality to reach what anyone
21 considered to be acceptable parameters; is that
22 a fair statement?

23 MR. MARKER: Form; foundation.

24 A. I hate to say I wasn't around to

1 see that then.

2 Q. Okay. Do you remember the Flush
3 for Flint campaign?

4 A. Vaguely.

5 Q. What do you remember about that
6 Flush for Flint campaign?

7 A. I just remember it was, yeah, get
8 all the remaining -- yeah, Flint River water out
9 of the system, so to speak, and to flush the new
10 water with phosphate all through the system.

11 Q. Do you remember approximately when
12 that was?

13 A. I do not. It had to be close to
14 around the time I departed the city.

15 Q. Okay. So that was sometime
16 between January and April of 2016?

17 A. Okay.

18 Q. You need to --

19 A. I'm sorry. Yes.

20 Q. And that's because it was
21 understood that the water system needed -- steps
22 needed to be taken to help the water system
23 recover?

24 A. Correct. You kind of have to

1 rebuild that phosphate coating on the pipes,
2 yes.

3 Q. Okay. So the water flowing
4 through the pipes in January to April of 2016,
5 although it was sourced from the Detroit water
6 system, didn't have the chemistry and
7 characteristics that the Detroit water had
8 flowing through Flint pipes before April 2014;
9 is that a fair statement?

10 MR. KUHL: Objection; form and
11 foundation.

12 A. I could say that's a fair
13 statement.

14 Q. Okay. And you were asked about
15 that ETC report. And I just have to ask you,
16 sir, I saw that that report was dated somewhere
17 in late December 2014, and it talked about
18 testing that was done in late December 2014.

19 Were you in touch with anyone at
20 McLaren Flint about their water quality concerns
21 in December 2014?

22 A. Not that I can recall, no.

23 Q. And had you requested that they
24 send you results of testing that were generated

1 in December 2014?

2 MR. MARKER: Objection to form.

3 A. No. I'd only asked that, you
4 know, whatever data they could share would be
5 appreciated, but I didn't specify a month or
6 anything.

7 Q. Okay. So you didn't have an open
8 line of communication with the folks at McLaren
9 Flint at that time; that's your recollection,
10 right?

11 A. Correct. Yes.

12 Q. Okay. Do you have any knowledge
13 as to other -- other persons McLaren Flint may
14 have been communicating with at that time in
15 Michigan State government?

16 A. I am not aware, no.

17 Q. Okay. And the -- and now I'm
18 really going to jump around, and I'm sorry, and
19 it's the end of the day, and I know you're
20 tired. And, again, if you don't hear me or
21 understand my question, let me know and I'll try
22 again.

23 You've talked -- we talked about
24 the -- when Mr. Kuhl was asking you questions,

1 you testified, as you have repeatedly before,
2 that the MORs for the period of April 2014 to
3 October 2015 show compliance with the Safe
4 Drinking Water Act regulations, right?

5 A. Correct. Yes.

6 Q. And those MORs are what MDEQ looks
7 to to determine if there's a violation; is that
8 right?

9 A. Yes.

10 Q. And the -- there was much data
11 that was the non-regulatory sampling that we
12 talked about that was not included in the MORs,
13 right?

14 A. Correct. Yes.

15 Q. And, in fact, MDEQ in connection
16 with the Lead and Copper Rule investigation
17 instructed you to remove results from the
18 regulatory reporting; is that correct?

19 A. That is correct.

20 Q. And that was -- you were -- and
21 that occurred and you sensed at that time there
22 was an imminent violation, right?

23 MR. KUHL: Objection to form,
24 foundation.

1 Q. And if Ms. Walters' test results
2 for the Lead and Copper Rule had been included
3 in the MORs, what would have happened?

4 MR. KUHL: Objection to form
5 foundation.

6 A. The 90th percentile for lead would
7 have increased.

8 Q. Okay. And so your contacts at the
9 MDEQ -- and that was Mr. Busch and Mr. Prysby --
10 instructed you to remove those results from the
11 sampling pool, correct?

12 MR. KUHL: Objection to form
13 foundation. Misstates the testimony.

14 A. That is correct.

15 Q. And in a similar vein, you had
16 concerns about the number of samples that you
17 could include in the Lead and Copper Rule
18 sampling pool, correct, that you were supposed
19 to obtain 100 and were having finding customers?

20 A. Yes. I was worried about being
21 short on samples, yes.

22 Q. Okay. And if -- what would have
23 happened if they were short -- if you were short
24 on samples for that sampling purpose?

1 A. To my knowledge, we would have got
2 a monitoring violation and then probably had to
3 start a whole new six-month round of sampling.

4 Q. So what happened when you fell
5 short of the 100 samples at that time?

6 A. At that time I remember sending an
7 e-mail I believe to Mr. Rosenthal with the MDEQ
8 inquiring what would happen. I knew we were
9 only at 70-some odd samples. And with the time
10 running short, I knew I wasn't going to get to
11 100. So I was letting him know we were going to
12 continue to try to solicit samples and just to
13 see what was going to happen if we needed to
14 start a new six-month round of sampling.

15 Q. Okay. And so the -- but the
16 sampling pool requirement was dropped from 100
17 to 60 or 70?

18 A. Correct. Yes.

19 Q. Okay. And that enabled you to
20 avoid a violation for not hitting that target,
21 correct?

22 A. Yeah. In a sense, yes. Yep.

23 Q. Okay. Well, did I misstate that
24 in any way? You say, "In a sense."

1 A. No. I say "in a sense" because
2 they determined -- they lowered that. The
3 number of samples is based on population, and
4 supposedly my first report I had used older
5 census data, so they updated census data.

6 MR. MARKER: When you say "they,"
7 who are you talking about?

8 A. When I say "they," I talk about
9 MDEQ.

10 Q. And you talked about producing
11 drinking water at the plant. You were asked
12 about producing drinking water for human
13 consumption.

14 Do you remember that questioning?

15 A. Yes.

16 Q. And you understood that the water
17 that was being produced at the Flint water
18 treatment plant after April 2014 would be used
19 for human consumption, correct?

20 A. Yes.

21 Q. Okay. And that would include not
22 only -- drinking, right? Bathing?

23 A. Correct.

24 Q. Showering?

1 A. Yes.

2 Q. Washing hands?

3 A. Yes.

4 Q. Cooking, preparing food?

5 A. Right. Yes.

6 Q. And so that was all expected

7 activity in terms of human consumption of

8 drinking water, right?

9 A. Correct. Yes.

10 Q. Okay. And you knew that the water

11 that left your plant would eventually make its

12 way through those 600 or so miles of

13 distribution pipe through the service lines and

14 into people's homes at the tap, right?

15 A. Correct. Yes.

16 Q. Okay. And this is going to seem

17 like it's coming out of left field at this

18 point, but this is the way these things go.

19 We talked yesterday about the

20 ozone system. To your knowledge, was the ozone

21 system credited as part of the disinfection

22 process at the Flint water treatment plant?

23 A. It did some give some credit of

24 disinfection, yes.

1 Q. Okay. And how -- and how did that
2 work?

3 A. As in how we got credits or --

4 Q. Well, if we were to look at the
5 regulatory reporting sheets of how you achieved
6 the disinfection requirements, would ozone be
7 part of that calculation?

8 A. Yes.

9 Q. Okay. And where is the ozone
10 applied?

11 A. It is the first step in the
12 treatment process.

13 Q. Okay. And you testified
14 previously that the ozone system wasn't fully
15 operational in 2014?

16 A. It wasn't operating as efficient
17 as it should have.

18 Q. And, to your knowledge, did that
19 impact its ability to disinfect the water?

20 A. I will say I guess at times it
21 had -- it had a lesser effect than others
22 disinfecting the water. Although our process --
23 other processes stepped up, and consequently
24 give other forms of disinfection as well.

1 Q. Right. I understand you said you
2 had the ability to add chlorine at various
3 points in the treatment process. And, in fact,
4 because of your intervention, there was a second
5 stage of chlorine injection added at the plant,
6 right?

7 A. Correct. Yes.

8 Q. Do you know the approximate time
9 frame of when that second step of chlorination
10 was added?

11 A. It's an approximate time. I think
12 it's sometime in summer of 2014, and that was a
13 chlorination prior to filtration. So what we
14 termed a "midpoint chlorination treatment
15 system."

16 Q. And why did you do that?

17 A. That was to keep -- keep our
18 filters cleaner. We also would get more
19 disinfection credit via the softening process,
20 because we'd raise the pH of the water up to 12.
21 So that had significant disinfection
22 capabilities as well.

23 Q. Okay. Was the MDEQ involved in
24 that -- adding that process to your treatment?

1 A. Yes. That was a new step in the
2 process, so we had to get permitted for that,
3 yes.

4 Q. Okay. And the -- and this helped
5 you achieve the CT requirements, correct,
6 contact time?

7 A. That was part of it, yes.

8 Q. Okay. And that contact time is
9 measured at the Flint water treatment plant,
10 correct?

11 A. Correct. Yes.

12 Q. So that doesn't account for
13 anything that happens to the water once it
14 leaves the valve at the Flint water treatment
15 plant?

16 A. That's correct.

17 Q. Okay. And the -- I understand in
18 addition to adding a second chlorine step, you
19 had the ability to boost the dose from time to
20 time, boost the dose of chlorine from time to
21 time; is that right?

22 A. Yes.

23 Q. And how would you do that? Was
24 there a port or a point in the treatment system

1 where you were able to add chlorine?

2 A. When I think about boosting the
3 chlorine, I think about out in our distribution
4 system at our two reservoirs located within the
5 city. We had that ability.

6 Q. So you could physically add
7 chlorine to the reservoirs?

8 A. Yes, yes. We had a chlorine
9 feeder we could turn on to boost the chlorine in
10 the reservoir.

11 Q. And would there be any record of
12 when, if at all, the chlorine was boosted at the
13 reservoirs in 2014 and 2015?

14 A. Yes. There should be, yes.

15 Q. And what were those records
16 called?

17 A. Oh, they would probably be under
18 reservoir chlorination, something along those
19 lines.

20 Q. Okay. And those would be records
21 in the city of Flint's records of the water
22 treatment plant?

23 A. Yes. They should be, yes.

24 Q. And how about, were you able to

1 add the chlorine -- increase the chlorine dose
2 at the plant during the treatment process?

3 A. Yes.

4 Q. And would there be any records of
5 that?

6 A. Yes.

7 Q. And is there a form for that?

8 A. A lot of -- if it was done at the
9 water treatment plant, you could find that on
10 the MOR because we would have to report the
11 pounds per day of chlorine that we used.

12 Q. And the MOR reports averages,
13 right? You sit and do that Excel chart and you
14 calculate averages based on the dailies and
15 weeklies?

16 A. Yeah. Basically there would be a
17 report of how many pounds per chlorine each day
18 we used throughout the month.

19 Q. Okay.

20 MR. CAMPBELL: Susan, it's getting
21 close to --

22 MS. SMITH: I know. I'm trying to
23 wrap it up. Yes, I will.

24 In fact, as a courtesy, we've got

1 a weather disaster apparently about to
2 happen. So out of courtesy to
3 Mr. Campbell and his schedule and even
4 weather issues, I'll wrap that up and
5 potentially resume tomorrow, but that
6 may -- that may be the end of it. But I
7 reserve the right to continue
8 questioning as time allows.

9 MR. CAMPBELL: Is that it for the
10 day?

11 MS. SMITH: Well, I don't want to
12 keep anyone here against their will.

13 MR. CAMPBELL: It's just you've
14 been going for, like, 40 minutes, and
15 it's the end of the day. We've got to
16 come back tomorrow morning anyway.

17 MS. SMITH: Understood. Yeah.
18 That makes sense. We'll do that.

19 MR. CAMPBELL: Including me is
20 worried about the snow and weather.

21 MS. SMITH: I don't want to put
22 anyone in peril. So we'll wrap it up
23 and resume in the morning. And if I
24 have any continued questions, I'll do

1 that first. I may not have any.

2 THE VIDEOGRAPHER: This concludes
3 today's testimony. We are off the
4 reported at 5:13 p.m.

5 - - -

6 Thereupon, at 5:13 p.m., on Tuesday,
7 February 25, 2020, the deposition was adjourned.

8 - - -

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1 CERTIFICATE

2 STATE OF MICHIGAN :

SS:

3 COUNTY OF _____:

4

5 I, MICHAEL B. GLASGOW, do hereby certify
6 that I have read the foregoing transcript of my
7 cross-examination given on February 25, 2020; that
8 together with the correction page attached hereto
9 noting changes in form or substance, if any, it is
10 true and correct.

11

MICHAEL B. GLASGOW

12

13 I do hereby certify that the foregoing
14 transcript of the cross-examination of MICHAEL B.
15 GLASGOW was submitted to the witness for reading and
16 signing; that after he had stated to the undersigned
17 Notary Public that he had read and examined his
18 cross-examination, he signed the same in my presence
19 on the _____ day of _____, 2020.

20

21 _____
NOTARY PUBLIC - STATE OF MICHIGAN

22

23 My Commission Expires:

24 _____, ____.

CERTIFICATE

I, Carol A. Kirk, a Registered Merit Reporter and Notary Public in and for the State of Michigan, duly commissioned and qualified, do hereby certify that the within-named MICHAEL B. GLASGOW was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in the cause aforesaid; that the deposition then given by him was by me reduced to stenotype in the presence of said witness; that the foregoing is a true and correct transcript of the deposition so given by him; that the deposition was taken at the time and place in the caption specified and was completed without adjournment; and that I am in no way related to or employed by any attorney or party hereto or financially interested in the action; and I am not, nor is the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Dexter, Michigan on this 9th day of March 2020.

CAROL A. KIRK, RMR, CSR-9139
NOTARY PUBLIC - STATE OF MICHIGAN

My Commission Expires: August 19, 2022.

- - -

1 DEPOSITION ERRATA SHEET

2 I, MICHAEL B. GLASGOW, have read the transcript
of my deposition taken on the 25th day of February
3 2020, or the same has been read to me. I request that
the following changes be entered upon the record for
4 the reasons so indicated. I have signed the signature
page and authorize you to attach the same to the
5 original transcript.

6 Page Line Change and Reason:

7	_____	_____	_____
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23	_____	_____	_____
24	Date _____	Signature _____	

1 UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF MICHIGAN
3 SOUTHERN DIVISION
4 _____
5)
6) Civil Action No.
7) 5:16-cv-10444-JEL-MKM
8 In re: FLINT WATER CASES) (consolidated)
9)
10) Hon. Judith E. Levy
11) Mag. Mona K. Majzoub
12)
13 _____)

14 HIGHLY CONFIDENTIAL
15 VIDEOTAPED DEPOSITION OF MICHAEL B. GLASGOW
16 VOLUME III

17 Wednesday, February 26, 2020
18 at 8:58 a.m.

19 Taken at: Butzel Long
20 41000 Woodward Avenue
21 Bloomfield Hills, Michigan 48304

22 REPORTED BY: CAROL A. KIRK, RMR/CSR-9139
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14 ALSO PRESENT:

15 Neal Rogers, Videographer

16

17 - - -

18

19

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1	VIDEOTAPED DEPOSITION OF MICHAEL B. GLASGOW	
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6	Exhibit 86	E-mail string ending with an e-mail to Mr. Wright and others from Mr. Croft, dated 2/25/2015, Bates-stamped CROFT - 000001101 through 1106	814
7			
8			
9	Exhibit 87	Document titled, "City of Flint Technical Advisory Committee, 5/20/2015 Meeting Summary," Bates-stamped COF_FED_0012286	819
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13			
14	Exhibit 89	E-mail string to Messrs. Earley, Walling, and Lorenz from Ms. Murphy, dated 11/3/2014, Bates-stamped COF_FED_0137795	880
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1 P R O C E E D I N G S

2 - - -

3 THE VIDEOGRAPHER: We are now on
4 the record. My name is Neal Rogers.
5 I'm the video for Golkow Litigation
6 Services. Today's date is February 26,
7 2020, and the time is 8:58 a.m.

8 This video deposition is being
9 held in Bloomfield Hills, Michigan, In
10 Re: Flint water cases, Civil Action No.
11 5:16-cv-10444-JEL-MKM for the U.S.
12 District Court, Eastern District of
13 Michigan, Southern Division.

14 The deponent is Michael Glasgow.
15 Counsel will be noted on the
16 stenographic record.

17 - - -

18 MICHAEL B. GLASGOW

19 being by me previously duly sworn, as hereinafter
20 certified, testifies and says as follows:

21 FURTHER EXAMINATION (CONT'D)

22 BY MS. SMITH:

23 Q. Good morning, Mr. Glasgow. I'm
24 Susan Smith.

1 We were speaking yesterday when we
2 decided to wrap up because of the imminent
3 weather disaster everyone was predicting.

4 We had a long day yesterday, and
5 you were asked a lot of questions and were
6 presented with many documents. I wanted to ask
7 you, have you had a chance to think over your
8 testimony the last two days?

9 A. Yes. Somewhat, yes.

10 Q. And is there anything that you
11 thought of that you'd like to change in terms of
12 what you said or how it was said?

13 A. Not that I can recall. No.

14 MR. FAJEN: This is Jim Fajen for
15 Adam Rosenthal.

16 Q. And yesterday you were asked
17 questions about testing around 212 Browning
18 Street, Ms. Walters' home and your assessment
19 that you could not make projections about what
20 was happening in the entire system. It was a
21 systemwide problem based on that data set.

22 Did I understand you correctly?

23 A. Yes, you did.

24 Q. Okay. And you were asked

1 questions concerning sampling conducted in the
2 immediate area around McLaren Flint Hospital
3 yesterday by a company called ETC.

4 Would you have the same view of
5 that data set as you did with respect to the
6 data set at Ms. Walters' home, meaning you
7 couldn't project what was happening in the
8 entire system based on that information?

9 MR. MARKER: Objection; form,
10 foundation.

11 MR. DAWSON: Object to foundation.

12 MR. KIM: Objection to form as
13 well.

14 A. I will say yes.

15 Q. And would you agree, sir, that
16 data set gives you information about the
17 localized area in that immediate vicinity of the
18 hospital?

19 MR. MARKER: Objection; form,
20 foundation.

21 A. Yes.

22 Q. And yesterday you were shown
23 Exhibit -- Johnson Exhibit 142, which was marked
24 in this deposition as well.

1 MR. MARKER: Do you know what it
2 was marked as?

3 MS. SMITH: I don't. It's right
4 there (indicating.)

5 THE WITNESS: This is Johnson 141.

6 MS. SMITH: It is the October 3rd
7 e-mail -- it begins with the October 3rd
8 e-mail from Mr. Earley. It's
9 Bates-numbered COF_FED_0140171.

10 MR. DAWSON: What number is it?
11 147?

12 MS. SMITH: I have it as Johnson
13 142.

14 MR. DAWSON: Thank you.

15 MS. SMITH: Yeah.

16 MR. MARKER: October 30 or
17 October 31?

18 MS. SMITH: October 3rd.

19 MR. MARKER: 3rd.

20 MS. SMITH: I can hand you my
21 copy. We can do it that way.

22 BY MS. SMITH:

23 Q. And who is Mr. Earley?

24 A. At that time I believe he was the

1 emergency manager for the city of Flint.

2 Q. And this is Mr. Earley's response
3 to ultimately your report back about your first
4 meeting at McLaren Flint Hospital in
5 October 2014; is that right?

6 A. Yeah, I could agree with that.

7 Q. And in that e-mail, Mr. Earley
8 says, "Therein lies our message - an internal
9 problem at Flint that we are helping them with."

10 Correct?

11 MR. MARKER: Objection to form,
12 foundation.

13 A. An internal issue at McLaren that
14 we were working with, yes.

15 (Reporter clarification.)

16 A. I said, to me, it reads an
17 internal issue at McLaren that we were working
18 on.

19 Q. Okay. And did you receive this
20 e-mail?

21 A. I did not.

22 Q. You did not. Okay.

23 A. I don't recall. I see I'm cc'd on
24 it, but I don't recall.

1 MS. SMITH: Okay. Well, then I
2 will have no further questions.

3 THE VIDEOGRAPHER: Going off the
4 record at 9:06 a.m.

5 (Pause in proceedings.)

6 THE VIDEOGRAPHER: We are back on
7 the record at 9:08 a.m.

8 - - -

9 FURTHER EXAMINATION

10 BY MS. DEVINE:

11 Q. Good morning, Mr. Glasgow. My
12 name Alaina Devine. I represent the Veolia
13 North America Defendants. I work with
14 Mr. Campbell who was here questioning you on
15 Monday. I just have a few follow-up questions
16 for you based on the testimony you've given over
17 the past two days.

18 You had testified that there was a
19 decision made with respect to corrosion control
20 treatment and specifically phosphates before the
21 switch in April of 2014.

22 Do you recall testifying about
23 that?

24 A. I do, yes.

1 Q. And if I recall correctly, you
2 gave testimony that there was instruction from
3 the MDEQ, specifically Mr. Prysby, who was the
4 engineer assigned to the city of Flint, your
5 engineer, that they were not going to be adding
6 phosphates to the water; you were not required
7 to add phosphates to the water; is that correct?

8 MR. MORRISSEY: Objection to form.

9 MS. COLLINS: Object to the form.

10 MR. KUHL: Object to form; assumes
11 testimony.

12 A. That is correct.

13 Q. What is your understanding of
14 Mr. Prysby's role with respect to the city of
15 Flint?

16 A. He was our MDEQ district engineer
17 assigned to oversee the city.

18 Q. Thank you very much.

19 With respect to the decision not
20 to implement corrosion control treatment or add
21 phosphates to the water, do you know the reason
22 for that, as you sit here today?

23 A. The reason is it was explained to
24 me their interpretation of the Safe Drinking

1 Water Act was that a change in water source
2 would kind of start us from scratch, so we would
3 have to endure two six-month rounds of lead and
4 copper samples, and then a determination would
5 be made whether phosphate was necessary or not.

6 Q. Do you know if there were any cost
7 considerations associated with that?

8 A. Not to my knowledge.

9 Q. Okay. Or any wastewater
10 considerations?

11 A. Not to my knowledge.

12 Q. Yesterday you were asked to look
13 at a series -- or excuse me -- Monday -- a
14 series of exhibits that the VNA Defendants put
15 in front of you, specifically Exhibits 11 and
16 12. And I've asked you to pull those out this
17 morning.

18 If you recall, there was some
19 questioning and testimony about whether these
20 were templates created by the MDEQ; is that
21 correct?

22 A. Yes, that is correct.

23 Q. And if you look specifically -- I
24 believe it's Exhibit 11. There is a paragraph

1 in italics halfway down on that page which
2 discusses lead and the impacts of lead on humans
3 and drinking water; is that correct?

4 A. That is correct. Yes.

5 Q. And your testimony on Monday was
6 that this was information you were aware of as
7 the operator in charge of the Flint water
8 treatment plant in 2013.

9 Is that still your testimony
10 today?

11 A. Yes.

12 Q. And that's true in 2014 and 2015
13 as well, correct?

14 A. Correct.

15 Q. And you didn't need anyone to tell
16 you in 2013, 2014, or 2015 that lead can cause
17 serious health problems if too much enters the
18 body from drinking water or other sources; is
19 that correct?

20 A. That is correct.

21 Q. And is it fair to say that your
22 colleagues at the city of Flint, specifically
23 Mr. Croft, Mr. Johnson, Mr. Bincsik, or
24 Mr. Wright, also knew that lead in drinking

1 water could present serious health risks --

2 MR. MARKER: Form, foundation.

3 MR. KUHL: Object to form and
4 foundation.

5 Q. -- as described in this paragraph?

6 MR. KUHL: Sorry. Object to form
7 and foundation.

8 A. I will say I hope they understood
9 that issue.

10 Q. Okay.

11 A. I can't speak for them, though.

12 Q. And you were asked a series of
13 questions on Monday about the specific duties of
14 the city of Flint, specifically the duty and
15 obligation of the city and its officials to
16 inform its citizens to protect themselves from
17 lead in the drinking water.

18 Do you remember that series of
19 questions?

20 A. I do, yes.

21 Q. And that applies not only to you,
22 but also to Mr. Croft who was the director of
23 public works at the time, Mr. Johnson who was
24 the utilities director at the time, Mr. Bincsik

1 who was in charge of the distribution system,
2 and Mr. Wright who was the water treatment
3 supervisor; is that correct?

4 MR. KUHL: Objection; form and
5 foundation.

6 A. Yes, that's correct.

7 Q. I'd ask you to look at Exhibit 10.
8 We showed you this exhibit on Monday. And at
9 that time, we discussed that this was an e-mail
10 chain discussing the context of the LeeAnne
11 Walters' lead testing results in February of
12 2015.

13 Do you remember that?

14 A. I do, yes.

15 Q. Okay. And this first e-mail here
16 that you sent on February 24, 2015 at 1:48 p.m.,
17 that was sent to Mr. Croft; is that correct?

18 A. Yes.

19 Q. And he's the director of public
20 works in the city of Flint?

21 A. Yes. He was at that time.

22 Q. And Mr. Johnson who was the
23 utilities director at that time?

24 A. Yes.

1 Q. And Mr. Croft was Mr. Johnson's
2 supervisor; is that fair to say?

3 A. That is correct.

4 Q. Okay. Mr. Bincsik who is in
5 charge of the distribution system, and
6 Mr. Johnson was Mr. Bincsik's supervisor; is
7 that fair to say?

8 A. That is fair to say, yes.

9 Q. And Mr. Wright who at the time was
10 the supervisor, at least on the administrative
11 side of things, at the water treatment plant,
12 correct?

13 A. Correct.

14 Q. So you're sending this e-mail to
15 your supervisors and their supervisors; is that
16 right?

17 A. That is correct, yes.

18 Q. And in this e-mail, you're
19 specifically discussing the lead testing results
20 at the Walters' residence, specifically the 104
21 parts per billion test result that you
22 discovered at that time; is that right?

23 A. That is correct.

24 Q. And you write in this paragraph,

1 "Definitely a pressing issue here."

2 Mr. Glasgow, were you specifically
3 speaking to the high lead content in the water
4 at that time?

5 MR. KUHL: Objection to form,
6 foundation.

7 A. Yes. That is what this e-mail is
8 revolving around.

9 Q. Okay. So at that time, you're
10 expressing to your supervisors and their
11 supervisors at the city of Flint that this is a
12 pressing issue, the fact that there's high lead
13 content in the water as evidenced by this test
14 result is a pressing issue; is that correct?

15 MR. KUHL: Objection to form and
16 foundation, misstating testimony.

17 A. Yeah, I'll say there's a pressing
18 issue at this residence. Yes.

19 Q. Okay. If you --

20 MR. KIM: What's the exhibit
21 number?

22 MS. DEVINE: This is Exhibit 10.
23 It's CROFT-000000125.

24

1 BY MS. DEVINE:

2 Q. If you look at the next e-mail in
3 the chain, this is Mr. Bincsik. And as I just
4 asked you, he's in charge of the distribution
5 system; is that correct?

6 A. That is correct. Yes.

7 Q. Okay. And Mr. Bincsik responds to
8 your e-mail stating that "The majority of the
9 service lines in Flint are lead." He goes to
10 say that "Marvin from Veolia mentioned to me
11 that he thought we needed to add phosphates to
12 prevent this" -- this being lead. "Perhaps we
13 need to move on this sooner rather than later."

14 Did I read that correctly?

15 A. Yes, you did.

16 Q. And this is Mr. Bincsik who's in
17 charge of the distribution system sending this
18 e-mail to his supervisors and his supervisors'
19 supervisors, again Mr. Croft, correct?

20 A. Correct. Yes.

21 Q. And you received this e-mail as
22 well, correct?

23 A. Yes.

24 Q. And this e-mail, again, is made in

1 the context of a LeeAnne Walters' lead testing
2 result; is that right?

3 A. That is correct. Yes.

4 Q. I'd like you to move to the next
5 e-mail down the chain.

6 MR. MARKER: It's not attached to
7 this exhibit?

8 THE WITNESS: It's on the back
9 side.

10 MR. MARKER: Oh, it's on the flip
11 side.

12 BY MS. DEVINE:

13 Q. So at the bottom of the first
14 page, it begins with an e-mail from Mr. Croft.
15 This is the same day less than an hour after you
16 sent your first e-mail saying "Definitely a
17 pressing issue," and about less than ten minutes
18 after Mr. Bincsik expresses that phosphates
19 should be added to the water, Mr. Croft then
20 responds, if you turn to the second page, "Move
21 quickly to isolate this to a service line if
22 possible."

23 Did I read that correctly?

24 A. Yes.

1 MR. MORRISSEY: Object to form.

2 Q. Does Mr. Croft's e-mail here
3 acknowledge that Mr. Bincsik is making a
4 recommendation that phosphates should be added
5 to the water to help prevent lead from leaching?

6 MR. MARKER: Objection; form,
7 foundation.

8 MR. KUHL: Objection; form,
9 foundation, calls for speculation.

10 A. I can't say I get that
11 understanding.

12 Q. Okay. So you don't see anything
13 in this e-mail that specifically responds to or
14 discusses the recommendation that Mr. Bincsik is
15 passing on, do you?

16 MR. KUHL: Objection; form,
17 foundation.

18 MR. MORRISSEY: Objection.

19 A. I can't say I do, no.

20 Q. Okay. Are you aware of any
21 actions other than Mr. Croft's response that the
22 issues should be isolated to the service line if
23 possible, that Mr. Croft specifically took with
24 respect to the recommendation to add phosphate

1 to the water?

2 MR. MORRISSEY: Object to form.

3 A. I'm sorry. Could you restate
4 that?

5 Q. Sure. Are you aware of any
6 actions that Mr. Croft took in response to the
7 recommendation passed on by Mr. Bincsik's
8 previous e-mail about adding phosphate to the
9 water other than this e-mail right here?

10 MR. MORRISSEY: Object to form.

11 A. I do not, no.

12 Q. Are you aware of any actions
13 Mr. Johnson took?

14 MR. MORRISSEY: Object to form.

15 A. No, I am not.

16 Q. Are you aware of any actions that
17 Mr. Wright took in response to this e-mail from
18 Mr. Bincsik?

19 MR. MORRISSEY: Object to form.

20 A. I do not, no.

21 Q. Did you take any actions as a
22 result of receiving that e-mail from Mr. Bincsik
23 with respect to the recommendations of adding
24 phosphate to the water?

1 A. I did not, no.

2 Q. I believe on Monday you had
3 testified about a discussion that you had with
4 Mr. Green; is that correct?

5 A. Yes.

6 Q. And that was somewhere, based on
7 your testimony, in the late February, early
8 March time frame; is that accurate?

9 A. Yeah. To the best of my
10 recollection, yes.

11 Q. And that specific discussion was
12 with respect to adding phosphate to the water;
13 is that right?

14 A. That is correct.

15 Q. And I believe you also testified
16 on Monday that you made that same recommendation
17 to the exact same superiors who are listed on
18 this e-mail, Mr. Croft, Mr. Johnson, and
19 Mr. Wright; is that correct?

20 MR. MORRISSEY: Object to form.

21 A. I -- I don't recall if I made that
22 comment.

23 Q. Okay. I have your testimony from
24 Monday.

1 A. Yeah, if it's in my testimony,
2 then I will stick by my testimony. When I'm
3 originally thinking about the time I mentioned
4 it to Mr. Green, it was after a meeting and just
5 kind as we were passing in the hallway.

6 Q. Sure. But you had testified that
7 at the time of the Walters' test results, that's
8 when you first started to learn that lead could
9 be a potential in the Flint distribution system;
10 is that correct?

11 A. That is correct, yes.

12 MR. MORRISSEY: Object to form.

13 Q. And the action that you took in
14 speaking to Mr. Green was as a direct response
15 to that discovery on your own?

16 A. Yes.

17 Q. If you look down to the next
18 e-mail, in response to Mr. Croft's statement
19 that you should move quickly or the people on
20 the chain should move quickly to isolate this to
21 the service line if possible, Mr. Bincsik
22 responds less than two hours later stating, "I
23 think this indicates a larger potential problem
24 in the system. If this one service is showing

1 lead issues, the entire system could begin to
2 show these problems."

3 And he sends that e-mail to,
4 again, his supervisors and their supervisor; is
5 that right?

6 A. That is correct. Yes.

7 Q. And you're also included on that
8 e-mail; is that correct?

9 A. Yes.

10 Q. You respond the next morning to
11 the same e-mail chain indicating, "I'm not sure
12 I would rush to say this will be seen in the
13 entire system."

14 A. Yes.

15 Q. Do you stand by that statement
16 here today, Mr. Glasgow?

17 A. Yes, I do.

18 Q. Okay. Is it true that Mr. Bincsik
19 was, in fact, right that it could be a potential
20 problem in the system, a lead problem in the
21 system?

22 MR. KUHL: Objection to form and
23 foundation.

24 A. I think hindsight shows us that it

1 was -- he was right. I based it on
2 laboratory -- I like to see lots of data before
3 I make a decision --

4 Q. Sure.

5 A. -- which is why I respond the way
6 I do in my response to his e-mail.

7 Q. But you were aware of
8 Mr. Bincsik's prediction at that time in
9 February of 2015 as the supervisor of the
10 distribution system, that to him this indicates
11 a larger potential problem in the system,
12 correct?

13 MR. MARKER: Form, foundation.

14 MR. KUHL: Objection to form,
15 foundation.

16 A. Correct.

17 Q. If you look at Exhibit 21, which
18 was shown to you on Monday. This is a Virginia
19 Tech Bates number. This is VATECH_00064173.

20 Sir, you're not listed as a
21 recipient or copied on this e-mail; is that
22 correct?

23 A. That is correct.

24 Q. But this is two days after you're

1 e-mailing with your supervisor and their
2 supervisors at the city of Flint with respect to
3 the Walters' test result; is that correct?

4 A. That is correct.

5 Q. And that was the exhibit we just
6 went through.

7 If you look at this exhibit, we
8 discussed how this is Miguel Del Toral who is an
9 individual at the EPA that I believe you
10 testified you actually spoke to about the
11 Walters' test results; is that right?

12 A. That is correct, yes.

13 Q. Okay. And he is e-mailing Mike
14 Prysby, who you describe as the DEQ engineer
15 assigned to the city of Flint, along with four
16 other EPA officials and two other MDEQ
17 officials; is that -- did I accurately summarize
18 who's in the to and from lines of this e-mail?

19 A. Yes. Your statement was accurate.

20 Q. If you look at the bottom of this
21 e-mail, Miguel Del Toral is stating, "If I
22 remember correctly, Detroit is feeding PO4" --
23 is that phosphates?

24 A. Yes.

1 Q. -- "for the LCR, but since Flint
2 is no longer part of that interconnection, I was
3 wondering what their OCCT is. They're required
4 to have OCTT in place, which is why I was asking
5 what they were using."

6 Were you aware that in February of
7 2015, the EPA was instructing the MDEQ that they
8 were required to have corrosion control
9 treatment in place?

10 MR. KUHL: Objection; form and
11 foundation.

12 A. Not at that time, no.

13 Q. That's not something Mr. Prysby
14 shared with you in 2015?

15 A. No, not that I can recall. No.

16 Q. And did the EPA directly share
17 that information with you?

18 A. No, they did not.

19 Q. Did the MDEQ in February of 2015
20 know that the city of Flint was not feeding
21 phosphates?

22 MR. MARKER: Objection; form and
23 foundation.

24 MS. COLLINS: Objection;

1 speculation, form.

2 A. Yes, I believe they understood our
3 treatment process.

4 Q. Do you know how many of the Veolia
5 North America recommendations were implemented
6 in the city of Flint?

7 MR. MORRISSEY: Object to form.

8 A. No. I cannot say offhand.

9 Q. Okay.

10 - - -

11 (Glasgow Deposition Exhibit 85 marked.)

12 - - -

13 MS. DEVINE: Counsel, this was
14 disclosed on our exhibit list. It's a
15 city of Flint blog post from June of
16 2015 titled "Drinking Water Testing."

17 BY MS. DEVINE:

18 Q. Sir, on the second page, it
19 indicates a signature line of Mike Glasgow.

20 Is that yourself?

21 A. Yes.

22 Q. Okay. And this is a blog post; is
23 that fair to say?

24 A. Yes, it appears to be.

1 Q. Okay. And this is from the June
2 of 2015 time frame according to the date on the
3 first page, which is June 18, 2015.

4 Do you recall writing this letter
5 or blog post?

6 A. I recall writing this letter. I
7 don't remember posting it on the blog. Most
8 likely, it was our city communications --

9 Q. You had give --

10 A. -- person.

11 Q. I apologize.

12 A. Oh, no. That's okay.

13 Q. You had given some testimony
14 yesterday and on Monday that in 2015 and in
15 2014, you did not know where the lead service
16 lines in the city of Flint specifically were,
17 correct?

18 MR. MARKER: Form, foundation.

19 A. That is correct. I did not have a
20 list with the information.

21 Q. Okay. And in June of 2015, I
22 believe you had also testified that you were
23 having difficulty collecting sufficient samples
24 in the city of Flint for the second round of

1 lead and copper testing?

2 A. That is correct. Yes.

3 Q. And in this post, you indicate
4 towards the bottom, "If you live in the city or
5 have family and friends who live in the city
6 that would like to be a part of the sampling
7 group, please contact me via e-mail or call the
8 water treatment plant," and it includes the
9 number.

10 A. Yes.

11 Q. Is it fair to say that you were
12 actively soliciting lead and copper samples from
13 basically anyone who would allow you to come
14 into their home and test?

15 MR. MARKER: Form, foundation.

16 A. Yes.

17 Q. Okay. Regardless of whether or
18 not they had a lead service line?

19 MR. KIM: Objection as to form.

20 A. Yes. Without the information, I
21 didn't know that. So we realized with
22 Ms. Walters early in February of '15, that there
23 was at least an issue out there.

24 So, yeah, a lot of panic was in

1 the city. So, yeah, we were going to accept
2 from wherever we could get the samples.

3 Q. Okay. And that was panic felt by
4 not only you but also your supervisors and their
5 j?

6 MR. MARKER: Objection; form,
7 foundation.

8 A. Yeah. I don't know if they were
9 as panicked as I was. I can't say that. I
10 would hope they were. But, yeah, I can't say.

11 Q. Okay. And the panic specifically
12 was that there was the potential for a
13 widespread lead issue?

14 MR. MARKER: Objection; form.

15 MR. KUHL: Objection; form,
16 foundation.

17 A. Yeah, my panic was I was worried
18 there would be more homes like Ms. Walters'
19 around.

20 Q. On Monday you were asked if you
21 know now how many homes in the city of Flint
22 actually have lead service lines as determined
23 through the Fast Start program.

24 Do you know what the number is?

1 MR. KIM: Objection as to form and
2 foundation.

3 A. I do not.

4 Q. Have you or anyone at the city of
5 Flint, to your knowledge, gone back and looked
6 at the lead and copper reports from 2014 and
7 2015 and determined if any of those samples were
8 from lead service lines?

9 MR. KIM: Objection as to form and
10 foundation.

11 MR. MARKER: Form, foundation.

12 A. I can't say that I know.

13 Q. Other than informing Mr. Prysby
14 and perhaps Mr. Rosenthal of the fact that you
15 didn't know where the lead service lines were,
16 did you tell anybody else about that?

17 MS. COLLINS: Objection; form.

18 A. I would imagine I told all of my
19 immediate supervisors. I was pressing them in
20 late October of 2014 to come up with a list for
21 me.

22 Q. And did they?

23 A. No.

24 Q. And the importance of knowing

1 where the lead service lines are for purposes of
2 lead and copper testing is to make sure you're
3 capturing the highest potential homes that have
4 lead in them; is that correct?

5 A. Yes.

6 MR. MARKER: Form and foundation.

7 MR. KUHL: Objection to form,
8 misstates the Lead and Copper Rule --

9 A. Yes, that would be the more --

10 MR. KUHL: -- constitutes a
11 Tier 1 --

12 A. -- more homes at risk for that
13 issue, yes.

14 MS. DEVINE: Okay. I have nothing
15 further.

16 THE VIDEOGRAPHER: We are going
17 off the record at 9:29 a.m.

18 (Pause in proceedings.)

19 THE VIDEOGRAPHER: We are back on
20 the record at 9:30 a.m.

21 - - -

22 FURTHER EXAMINATION

23 BY MR. GAMBLE:

24 Q. Mr. Glasgow, I'm going to be

1 jumping around quite a bit, so just bear with me
2 as far as the topics that I'm asking you about.
3 But I want to follow up on some of your prior
4 testimony from yesterday and the day before.

5 I believe yesterday you testified
6 in response to a question about responsibility
7 for implementing corrosion control at the Flint
8 water treatment plant prior to the switchover.

9 Do you recall being asked
10 questions about that?

11 A. I do, yes.

12 Q. And I think your response was that
13 you defer to the DEQ and the engineers as to who
14 was responsible for implementing corrosion
15 control.

16 Was that your response?

17 A. Yeah. From my recollection, yes.

18 Q. And when you were talking about
19 engineers, were you referring to LAN?

20 A. Yes.

21 Q. You didn't know or don't know what
22 LAN's scope of work was with regard to the work
23 on the Flint water treatment plant, do you?

24 A. I did not, no.

1 Q. That was not part of your job,
2 right?

3 A. No. Not at that time, no.

4 Q. You were not involved in
5 negotiations or meetings with LAN and the city
6 of Flint regarding what it was that LAN would do
7 with regard to retrofitting the Flint water
8 treatment plant?

9 A. No, I was not.

10 Q. And you only knew that they were
11 actually retained to do some design work on the
12 Flint water treatment plant equipment, correct?

13 A. Correct. I did not know the full
14 scope.

15 Q. They weren't talking to you about
16 how to chemically treat the water from the Flint
17 River at all, were they?

18 A. No, not that I can ever recall.

19 Q. They were not providing any input
20 to you about what dosages or what chemicals to
21 utilize when treating Flint River water when it
22 went online in April of 2014, correct?

23 A. Yes.

24 Q. Are you aware of whether LAN made

1 prior recommendations about corrosion control to
2 others at the city of Flint?

3 A. No, I am not aware.

4 Q. And you're not aware whether they
5 made recommendations regarding full softening?

6 A. No, I am not.

7 Q. But you were aware that they did
8 make a recommendation that the plant operate a
9 60- to 90-day -- 60- to 90-day plant test run to
10 actually evaluate the water quality that was
11 coming out of the Flint water treatment plant
12 using Flint River, correct?

13 A. Correct. Yes. I had a
14 conversation with Mr. Green about that myself,
15 yes.

16 Q. And you didn't implement any 60-
17 to 90-day test run to evaluate water quality
18 before distributing water in April of 2014, did
19 you?

20 A. I did not have the ability, no.

21 Q. And I want to make certain I'm
22 clear on this. We talked before about the Lead
23 and Copper Rule and what your understanding of
24 it was with regard to corrosion control.

1 Do you recall that testimony?

2 A. Yes.

3 Q. And I think you testified that
4 your understanding of the Lead and Copper Rule
5 was that some sort of corrosion control
6 treatment would need to be utilized in the final
7 water design and the water treatment coming out
8 of the Flint water treatment plant, correct?

9 MR. KUHL: Objection; form,
10 misstates his prior testimony.

11 A. Yes. From knowing that Detroit
12 water had a corrosion control or a corrosion
13 inhibitor in it, I was thinking along those
14 lines that we would need it as well.

15 Q. You never raised that concern --
16 well, strike that.

17 Was that a concern to you when the
18 MDEQ indicated they weren't going to require
19 some form of corrosion control prior to the
20 switchover?

21 MR. MARKER: Object to form,
22 foundation.

23 A. It wasn't a concern for long
24 with -- I don't want to say with their blessing,

1 but with their interpretation. That's what I
2 would go by.

3 Q. And you never took that concern or
4 those beliefs to LAN to discuss what was
5 required by the Lead and Copper Rule, right?

6 A. Not that I recall, no.

7 Q. You testified before about the
8 initial test run, is what I'll call it, which
9 was in July of 2013 at the Flint water treatment
10 plant.

11 Do you recall questions about
12 that?

13 A. I do, yes.

14 Q. And I think that was the first
15 time you fired up the plant to see if it would
16 actually work, right?

17 MR. MARKER: Form and foundation.

18 A. We had fired it up before. That
19 was the first time in a while we fired up the
20 softening process.

21 Q. So you were trying to adequately
22 treat the Flint River water during the July 2013
23 initial test run, correct?

24 A. Correct. Yes.

1 Q. And you were trying to get at
2 least some water data for how to treat the Flint
3 River water at that time, correct?

4 A. Correct. Yes.

5 Q. That test run ended after 30 days,
6 didn't it?

7 A. Yes.

8 Q. And, in fact, that test run was
9 shut down because the equipment in the Flint
10 water treatment plant wasn't operating
11 correctly?

12 A. There was some issues with
13 equipment. To truly recall why we shut down,
14 I'll have to say that I think some of the
15 employees were a little wore out from 30 days of
16 overtime.

17 Q. I believe yesterday you testified
18 that you were able to determine that the Flint
19 River water that was treated met the SDWA
20 requirements from the test runs.

21 Do you recall testifying about
22 that?

23 A. I do, yes.

24 Q. But you didn't confirm that the

1 water coming from the Flint River, the treated
2 water, in July of 2013 actually met SDWA
3 requirements, correct?

4 MR. KUHL: Objection to form.

5 A. Could you say that one more time?
6 I'm sorry.

7 Q. Well, let me rephrase it.

8 You were not able to gain any type
9 of meaningful data regarding water quality from
10 the initial test run in July of 2013, were you?

11 A. Well, I wouldn't say no quality
12 data. I mean, all data can be used for some
13 information, but I don't think -- from my memory
14 that, you know, we sent out extra samples to see
15 if we -- we met every single Safe Drinking Water
16 Act, you know, regulation. But I will say that
17 the test run still left many questions.

18 Q. You weren't able to determine
19 whether that water coming out of the Flint water
20 treatment plant in July of 2013 actually met
21 SDWA requirements, right?

22 MR. MARKER: Form, foundation.

23 MR. KIM: Object to form.

24 A. I will say I couldn't, no.

1 Q. Excuse me for one second. I need
2 to grab documents.

3 Mr. Glasgow, yesterday you were
4 asked questions about LAN's contract with the
5 city of Flint.

6 Do you recall that?

7 A. Yes, I do.

8 Q. And if I could have you turn to
9 Exhibit 72.

10 MR. MARKER: Certainly. One
11 moment. 72 --

12 A. 72? Are you sure this is --

13 MR. MARKER: -- or 71?

14 Q. I believe it's 71. I apologize.

15 A. No worries.

16 Q. And you recall being asked
17 questions about that document?

18 A. Yes, I do.

19 Q. Had you seen that document before
20 your deposition yesterday?

21 A. I can't say that I had.

22 Q. And you didn't know the specific
23 contents of the document, did you?

24 A. I did not, no.

1 Q. You were asked certain questions
2 about the scope of work that was contained
3 within that document, right?

4 A. Yes. To my recollection, yes.

5 Q. And that was the first time you
6 had read that, correct?

7 A. Correct.

8 Q. You were asked questions about the
9 compensation that was being proposed in that
10 document to be paid to LAN to do work on the
11 Flint water treatment plant.

12 Do you recall that?

13 A. I do, yes.

14 Q. And yesterday was the first time
15 you ever came to read that as well, correct?

16 A. Yes.

17 Q. Do you know the difference between
18 a proposal and a binding contract?

19 A. Yes, I do.

20 Q. And what's the difference?

21 A. A proposal is just what you're --
22 in a sense, without using the same word -- I
23 don't have my thesaurus. You're proposing
24 something. It's not set in stone. It's not

1 been agreed to or signed off on to be put into
2 action.

3 Q. And that's just common sense,
4 isn't it?

5 A. In my eyes, yes.

6 Q. If you would look at Exhibit 71
7 and if you could read the very first sentence of
8 the document.

9 A. "Lockwood, Andrews & Newnam, Inc.
10 (LAN) is pleased to submit our scope of services
11 and fee proposal for the above-referenced
12 project."

13 Q. Based on that sentence, do you
14 have an understanding of whether this is a
15 proposal or a contract?

16 MR. MARKER: Object to form.

17 A. I would infer that this is a
18 proposal.

19 Q. And, again, as you sit here today,
20 you have no idea what LAN's scope of work was,
21 correct?

22 A. Correct.

23 Q. You have no idea that the city of
24 Flint actually narrowed LAN's scope or proposed

1 scope of work throughout the early parts of
2 2013, correct?

3 MR. MARKER: Objection; form.

4 MR. KIM: Objection as to form.

5 MR. SCHNATZ: Objection.

6 A. Yeah, that is correct. I was
7 unaware.

8 Q. And you don't specifically know
9 what LAN was paid for their work on the Flint
10 water treatment plant, do you?

11 A. No. I never seen any true
12 figures.

13 Q. Mr. Glasgow, you were briefly
14 asked questions about LAN and its relationship
15 with the Leo A. Daly Company yesterday.

16 Do you recall that?

17 A. I do, yes.

18 Q. And I believe you testified you
19 did not even understand who the Leo A. Daly
20 Company is or was, correct?

21 A. That is correct. I had no
22 understanding.

23 Q. You have no understanding
24 regarding the relationship between LAN and

1 Leo A. Daly company, do you?

2 A. No, not whatsoever.

3 Q. You were asked questions yesterday
4 regarding LAN providing input on corrosion
5 control and water data. And I think you were
6 asked questions about what you would have liked
7 LAN to have told you, what you would have liked
8 Veolia to have told you about water quality and
9 corrosion control.

10 Do you recall those questions?

11 A. Vaguely, yes.

12 Q. Again, you didn't know what LAN's
13 scope of work was and whether they were required
14 contractually to tell you anything about
15 corrosion control or about water quality,
16 correct?

17 MR. MARKER: Form.

18 A. That is correct.

19 Q. If I could turn your attention to
20 Exhibit 75.

21 And you were shown this document
22 yesterday, and it was represented to you that it
23 was an internal LAN e-mail regarding corrosion
24 control.

1 Do you recall that?

2 A. I do, yes.

3 Q. And you had an opportunity to read
4 Exhibit 75, didn't you?

5 A. Yes, I did.

6 Q. And specifically they were
7 discussing what the city's decision was
8 regarding corrosion control and needing to
9 understand what it was, correct?

10 MR. MARKER: Form.

11 A. That is how I understood it when I
12 read it, yes.

13 Q. At the time that this was
14 issued -- and I believe it was sent in March of
15 2014 -- LAN's design work was pretty much
16 finished on the Flint water treatment plant,
17 correct?

18 MR. MORRISSEY: Object to
19 foundation.

20 A. To the best of my memory, I'll say
21 yes, because within, you know, about six weeks,
22 we went into service.

23 Q. And about that time, LAN was still
24 doing work, but they were doing work on projects

1 related to ultimately switching over to the KWA
2 water source, correct?

3 MR. SCHNATZ: Objection; form,
4 foundation.

5 A. That is correct. To my
6 understanding, yes.

7 Q. And so their work was not
8 continuing on with the Flint River or how to
9 deal with the Flint River? They were dealing
10 with the KWA, correct?

11 MR. SCHNATZ: Same objection.

12 A. I would say to the best of my
13 memory, yes.

14 Q. And would it surprise you that the
15 references to the need to understand corrosion
16 control that are contained in this document
17 actually relate to the KWA water source as
18 opposed to the Flint River?

19 MR. SCHNATZ: Objection to form
20 and foundation.

21 A. Well, just reading the e-mail
22 makes it hard to determine that. But looking at
23 the date, I could -- I could agree with that.

24 Q. I think you said before you

1 weren't aware of LAN recommendations relating to
2 the implementation of corrosion control at the
3 Flint water treatment plant using Flint River
4 water?

5 A. Yes, I believe that's correct.

6 Q. Are you aware as to whether LAN
7 and Warren Green had conversations with
8 Daugherty -- Duffy Johnson following the June 26
9 meeting regarding corrosion control?

10 A. I'm not aware of that.

11 Q. And do you have any understanding
12 of what was discussed between those two?

13 A. I do not.

14 Q. If I could turn your attention to
15 Exhibit 62.

16 A. This (indicating)?

17 Q. Yes, that's correct.

18 MR. MARKER: I've got it as
19 Exhibit 63.

20 MR. GAMBLE: I'm sorry. I seem to
21 be one off on everything. Actually, I
22 needed 63. I apologize.

23 BY MR. GAMBLE:

24 Q. You were asked a series of

1 questions by Mr. Kuhl yesterday about this
2 particular table.

3 Do you recall that?

4 A. Yes, I do.

5 Q. You were asked questions about the
6 lime dosages, correct?

7 A. Correct.

8 Q. And you were asked about the
9 dosages for ferric chloride, correct?

10 A. Correct.

11 Q. Do you know who made this
12 document?

13 A. I don't recall. I thought it --
14 it wasn't an internal city document. I believe
15 whoever was questioning me at the time, I
16 thought they had constructed this document.

17 Q. So as far as you know, this isn't
18 an official city of Flint document, correct?

19 A. Correct.

20 Q. And as you sit here today, you
21 don't know whether the numbers that are
22 represented in this chart are actually accurate,
23 do you?

24 A. No, I do not.

1 Q. But just taking the numbers for
2 what they are, you were asked about the ferric
3 chloride dosages from November of 2014 through
4 2015.

5 Do you recall that?

6 A. I do, yes.

7 Q. And I believe those numbers showed
8 at least a slight increase over the period of
9 time in ferric chloride dosage from
10 November 2014 through October of 2015, correct?

11 A. Correct. Yes.

12 MR. MORRISSEY: Object to form.

13 Q. You weren't asked about ferric
14 dosages earlier in 2014, were you?

15 A. No.

16 Q. And, in fact, they have data from
17 May through October of 2014 showing the ferric
18 chloride dosages, correct?

19 A. Correct. Yes.

20 Q. And when you look at those
21 numbers, in fact, those numbers from May to
22 September of 2014 with regard to the ferric
23 chloride dosages do not differ significantly at
24 all from the November through October 2015

1 numbers, do they?

2 MR. MARKER: Form.

3 MR. KUHL: Objection to form,
4 foundation.

5 A. As I look through here, it doesn't
6 appear -- there's minor fluctuations up and
7 down.

8 Q. In fact, in June of 2014, you were
9 feeding 17.1 --

10 A. Yes, milligrams per liter.

11 Q. Right. And in July, you were
12 feeding 17.9 milligrams per liter as well,
13 correct?

14 A. Correct.

15 Q. And those numbers were
16 significantly higher than November of 2014,
17 correct?

18 A. Correct. Yes.

19 Q. And they were higher than December
20 of 2014, correct?

21 A. Correct.

22 Q. They were higher than January of
23 2014, correct?

24 A. Correct.

1 Q. They were higher than February of
2 2014, correct?

3 A. Correct.

4 Q. They were higher than March of
5 2014, correct?

6 A. Correct.

7 Q. They were higher than April of
8 2015 -- pardon me -- from January through May of
9 2015, they were higher, correct?

10 A. Correct. I'll say January, yeah,
11 through April, they were higher. Yes.

12 Q. And when you were feeding the
13 dosages from May to September of 2014, you did
14 not have any recommendations from LAN or anyone
15 else that you needed to increase ferric chloride
16 dosages or feed those dosages, correct?

17 MR. MARKER: Form, foundation.

18 MR. KUHL: Can you read that
19 question back, please.

20 A. Correct.

21 MR. MARKER: Hang on.

22 (Record read back as follows:

23 "Question: And when you were feeding
24 the dosages from May to September of

1 2014, you did not have any
2 recommendations from LAN or anyone else
3 that you needed to increase ferric
4 chloride dosages or feed those dosages,
5 correct?")

6 A. I'll say no, not at that time.

7 Q. If I could turn your attention to
8 Exhibit 62. And that's the November 2014 LAN
9 OER report on the TTHM issue.

10 A. Okay.

11 Q. You recall seeing that yesterday?

12 A. Yes, I do.

13 Q. And you recall being asked
14 questions about it?

15 A. I do.

16 Q. When do you first recall ever
17 seeing that document?

18 A. I will say -- hard to remember. I
19 would imagine within a month or two after this
20 document was produced.

21 Q. So if that's November or late
22 November 2014, it would have been late December
23 or January of 2015 when you would have seen the
24 document?

1 MR. KUHL: Objection to form.

2 A. Yes, that would be my best
3 recollection.

4 Q. Did you read the document when you
5 first recall seeing it?

6 A. I believe -- I believe I scanned
7 through to kind of read it. I didn't go word
8 for word through it, but I glanced at it.

9 Q. Do you have any recollection of
10 when LAN was specifically retained to do the OER
11 with regard to the TTHM issues?

12 A. I don't recall offhand. I want to
13 say in possibly July or August of 2014.

14 Q. Do you know whether they had
15 started their work assessing and evaluating the
16 TTHM issues as of November of 2014?

17 A. I believe they were, yes.

18 Q. Okay. They were in the process of
19 doing jar tests in November of 2014, correct?

20 A. From what I can recall, yes.

21 Q. They didn't have any results of
22 those jar tests to tell you about, correct?

23 MR. KUHL: Objection; form,
24 foundation.

1 A. Not that I can recall.

2 Q. And you testified that you did
3 read the report. You don't recall there being
4 any specific recommendation to increase the
5 ferric chloride dosage in that November 2014
6 document, do you?

7 MR. MARKER: Form, foundation.

8 MR. KUHL: Objection; form,
9 foundation.

10 A. Not that I can recall without
11 going back through it here.

12 Q. In fact, nowhere in that 2014
13 document is there a specific recommendation for
14 increasing ferric chloride at that time?

15 MR. KUHL: Objection; form and
16 foundation.

17 Q. Do you understand that?

18 A. I do.

19 Q. You had no conversations with LAN
20 or Warren Green or Jeff Hansen about the need to
21 increase ferric chloride dosages in December of
22 2014, correct?

23 A. Not that I can recall.

24 Q. What about November of 2014?

1 A. Not that I can recall.

2 Q. What about January of 2015?

3 A. Not that I can recall.

4 Q. So if you increased ferric

5 chloride dosages in December -- December 2014

6 and into early 2015, that wouldn't have been due

7 to any recommendation made by LAN, correct?

8 MR. KUHLMAN: Objection; form

9 foundation. Misstates the prior

10 testimony.

11 A. Yeah, I cannot recall.

12 Q. Yesterday you were asked a

13 question by Class Plaintiffs' counsel that LAN

14 never said to you or anyone that the DEQ

15 decision regarding not including corrosion

16 control was wrong and needed to be addressed.

17 Do you recall that question?

18 A. I do, yeah.

19 Q. And I think you agreed with that

20 statement?

21 A. Yes.

22 Q. You don't have any understanding

23 of LAN's other conversations with employees at

24 the city of Flint, do you?

1 A. I do not, no.

2 Q. You don't have any understanding
3 or knowledge of what LAN told Brent Wright about
4 corrosion control, do you?

5 A. I do not, no.

6 Q. You don't know what LAN told Duffy
7 Johnson or Howard Croft about corrosion control,
8 correct?

9 A. Correct, I do not.

10 Q. And you don't know what LAN told
11 or raised with the MDEQ about water treatment,
12 full softening, or corrosion control, correct?

13 A. Correct, I do not.

14 Q. There was some discussion about in
15 February 2015, you may have mention to Warren
16 Green the need for a phosphate feed system.

17 Do you recall that?

18 A. Yes.

19 Q. And I think earlier today you said
20 that you caught him and had that conversation in
21 passing; is that correct?

22 A. That is correct, yes.

23 Q. Do you recall where that
24 conversation took place?

1 A. I believe that was at the city of
2 Flint water plant.

3 Q. Was there anybody else present
4 when you had that conversation with him?

5 A. There was a couple other people
6 around. I don't -- I don't believe they would
7 have heard or seen the discussion that we had.

8 Q. And the reason you had this
9 conversation was because of the LeeAnne Walters'
10 test results for lead, correct?

11 A. That is correct, yes.

12 Q. And this was the first time that
13 you had said anything to anyone at LAN about
14 lead levels being elevated in certain areas of
15 the distribution system, correct?

16 MR. MARKER: Form and foundation.

17 A. Yes. To the best of my memory,
18 yes.

19 Q. So you never talked with Jeff
20 Hansen or Warren Green at any time prior to
21 February of 2015 about the lead results or lead
22 testing that was being done in the city of
23 Flint?

24 MR. MARKER: Form, foundation.

1 A. No, not that I can recall.

2 Q. And to your knowledge, this was
3 the first time anyone from the city actually
4 informed LAN of any problems or issues with lead
5 in their distribution system, correct?

6 MR. MARKER: Form, foundation.

7 A. To the best of my knowledge,
8 correct. Yes.

9 MR. GAMBLE: Mr. Glasgow, those
10 are all the questions I have. I
11 appreciate your time.

12 THE VIDEOGRAPHER: We are going
13 off the record at 9:53 a.m.

14 (Recess taken.)

15 THE VIDEOGRAPHER: We are back on
16 the record at 10:03 a.m.

17 BY MR. KIM:

18 Q. Good morning, Mr. Glasgow.

19 I'm going to try to do this as
20 much as possible in chronological order in my
21 follow-ups here, but I may have to jump around
22 because of the nature of that.

23 Just a few minutes ago you were
24 discussing -- you were answering some questions

1 about the plant's test run in the summer of
2 2013.

3 Do you recall?

4 A. I do, yes.

5 Q. And you mentioned that there were
6 some equipment issues that were identified
7 through the course of that plant run.

8 Do you remember that testimony?

9 A. I do, yes.

10 Q. Can you recall what those
11 equipment issues were?

12 A. If my memory serves correct, there
13 was issues with one of the softening clarifiers.
14 The weirs weren't level, so that wasn't
15 functioning the way it was designed. And there
16 was -- the only other issue I can really
17 remember is issues with our ozone generation
18 equipment.

19 Q. Okay. And to your knowledge, were
20 those issues fixed after the plant run had
21 occurred?

22 A. Yes. They were addressed
23 eventually.

24 Q. And were those issues addressed by

1 the time that the city switched over to the use
2 of the Flint River in April of 2014?

3 Let's break that down.

4 A. Yeah.

5 Q. There was the issues you stated
6 with the clarifiers?

7 A. Yes.

8 Q. The leveling of the weirs?

9 A. Yes.

10 Q. Were those issues addressed by the
11 time that the city switched to the Flint River
12 in April of 2014?

13 A. To the best of my knowledge, yes.

14 Q. Now, you said there were some
15 issues with the ozone clarifiers.

16 A. Yes.

17 Q. And I seem to recall that on the
18 first day of your testimony, that you addressed
19 those were not fully resolved by April of 2014;
20 is that correct?

21 A. To the best of my knowledge, yes.

22 Q. Was the -- had there been steps
23 taken to address those issues by April of 2014?

24 A. To the best of my recollection,

1 yes.

2 Q. Do you recall what those steps
3 were?

4 A. In regards to the ozone
5 generators, I believe we were in the process of
6 or had contracted -- I can't remember the name
7 of the company. They had built the ozone
8 generators. We had contracted them to come in
9 and switch out some of the dielectrics inside
10 the equipment.

11 Q. Were those ozone generators
12 essentially functional in April of 2014?

13 A. Yes.

14 Q. So they were -- they would work
15 when the city switched over to the Flint River
16 as a water source? They just would not work at
17 optimal capacity?

18 A. Yes. That's a fair statement.

19 Q. Were they sufficient to handle the
20 city's needs at that time?

21 A. To my understanding, I will say
22 yes.

23 Q. Okay. So essentially, if I can
24 summarize, were there any other -- were there

1 any other plant equipment issues that you
2 remember being identified in the test run of the
3 summer of 2013?

4 A. Not that I can recall, no.

5 Q. Okay. So then all the issues that
6 were identified were addressed or were -- were
7 addressed or -- were either addressed or were
8 not going to prevent the city from being able to
9 successfully treat Flint river water; is that
10 correct?

11 MS. SMITH: Objection; form.

12 A. I would say that is correct, yes.

13 Q. Okay. Now, yesterday we had some
14 discussion about the Langelier index. You
15 used -- you used the Langelier index method to
16 determine that the -- to project that the water
17 from the Flint River would be mildly scale
18 forming; is that correct?

19 A. That is correct.

20 Q. And that it was also brought out
21 yesterday that the Langelier index is no longer
22 a recommended method for doing so; is that
23 correct?

24 A. That is correct.

1 Q. Do you remember when that was --
2 when that determination was made?

3 MR. MORRISSEY: Object to form.

4 A. I do not recall, no.

5 Q. Okay. Was the use of the
6 Langelier index an industry practice in 2013?

7 MR. MORRISSEY: Object to form.

8 A. I will say -- yeah, I will say
9 yes. It had been used for years prior to that
10 as well.

11 Q. How long has the Langelier index
12 been used?

13 MR. MORRISSEY: Object to form.

14 A. I don't know. I can recall
15 mention of it in my entire time in water
16 treatment. So I'll say at least 15, 20 years.

17 Q. Okay. Was the Langelier index
18 still in use in 2014?

19 A. To the best of my knowledge.

20 MR. MORRISSEY: Object to form.

21 You can correct it by saying "for what."

22 Q. Was the Langelier index used in
23 the water treatment industry for the calculation
24 of whether or not water would be scale forming

1 or not in 2013?

2 A. To the best of my knowledge, yes.

3 Q. Same question as to the year 2014?

4 A. I'll have the same answer. To the
5 best of my knowledge, yes.

6 Q. Okay. And was that still the case
7 in 2015, to the best of your knowledge?

8 A. Yes.

9 Q. So would it be fair to conclude
10 that, to the best of your knowledge, that the
11 use of the Langelier index was not -- was not --
12 the shortcomings in the Langelier index did not
13 become identified until after 2015?

14 MR. MORRISSEY: Object to form.

15 A. I will say that's when I learned
16 that there were shortcomings with the index, in
17 2015 or after.

18 Q. And by the shortcomings, you
19 understand that I'm talking about the use of the
20 Langelier index to predict whether or not water
21 would be scale forming or not?

22 A. Correct. Yes.

23 Q. Okay. Now, you testified also
24 yesterday as to communications with Michael

1 Prysby regarding your uncertainty as to the
2 exact composition of lead service lines, and I
3 believe this occurred in February of 2015; is
4 that correct?

5 A. Yes.

6 MS. COLLINS: Objection; form,
7 foundation.

8 Q. Okay. Do you recall what Mike
9 Prysby's response was when you raised this
10 issue?

11 A. Well, when I originally raised the
12 issue, it was in regards to required testing.
13 If we were adding phosphate, we would have to
14 test for it. So I inquired with Mr. Prysby what
15 the testing frequency might be. And it was at
16 that point he said that we were not going to be
17 required to add it off the start. We would wait
18 until the results of two six-month rounds of
19 lead and copper samples were analyzed.

20 Q. Okay. I think you might be
21 confused as to what I'm asking, because it
22 seems -- so what I'm asking is, when you -- you
23 talked to Michael Prysby in February of 2015
24 about your uncertainty as to the composition of

1 the lead service lines from which water samples
2 were being taken; is that correct?

3 A. Okay. Yes, that is correct.

4 MS. COLLINS: Objection;
5 mischaracterizes the evidence.

6 Q. And so you spoke to him about
7 the -- your lack of certainty in 2015. What was
8 his response at that time regarding the issue
9 that you did not have certainty as to the
10 composition of the service lines at the
11 addresses that water samples were being taken
12 from?

13 MS. COLLINS: Objection; form.

14 A. If my memory serves me correct, it
15 seems like he said he would pass that up the
16 line with his superiors and get back with us in
17 regards to that.

18 Q. Did he ever get back to you in
19 regards to that?

20 A. I do not recall.

21 Q. Okay. Now, at that time, that was
22 also about the same time frame under which the
23 e-mail that you looked at earlier from Rob
24 Bincsik stating that the city's service lines --

1 that 80 percent of the city's service lines were
2 lead was his belief.

3 Do you recall that?

4 A. I do, yes.

5 Q. Okay. Did you accept that
6 80 percent number as reasonably accurate?

7 A. Yes, I did. I had no reason to
8 doubt Mr. Bincsik.

9 Q. Okay. Now, in regards to the
10 addresses from which you submitted or that --
11 from the addresses from which water samples were
12 collected for both -- well, for -- let's start
13 for the July 2014 through December 2014 time
14 frame.

15 For those addresses, did you have
16 certain knowledge that any of them did not
17 contain a lead service line?

18 A. Not that I recall, no.

19 Q. For the addresses for which water
20 samples were collected and submitted for the
21 January 2014 through June 2015 -- or 2014 time
22 frame, did you have certain knowledge that any
23 of those service lines were not lead?

24 A. I did not, no.

1 Q. Okay. I just want to clarify --
2 go on and clarify some more issues about that
3 212 Browning, Ms. LeeAnne Walters' residence.

4 The e-mails that you -- that you
5 examined earlier, which I believe was admitted
6 as -- or that was listed as Exhibit 10,
7 CROFT000000125.

8 A. Okay.

9 Q. What is the date on that e-mail?

10 A. Tuesday, February 24, 2015.

11 Q. Okay. So the information in that
12 e-mail that's being discussed is what was known
13 as of February 25, 2015; is that correct?

14 A. That is correct.

15 Q. What do you recall doing about --
16 regarding 212 Browning Street after February 25,
17 2015?

18 A. Myself, I remember visiting the
19 residence a few more times, at least a couple
20 times, to pick up samples Ms. Walters had
21 collected, and also just to talk with her and
22 let her know what was going on.

23 After that is when I had kind of
24 determined her issue was her service line. And

1 to my recollection, I suggested that the city
2 replace her service line to that address.

3 Q. Okay. So after February 25, you
4 said that you determined that the issue was her
5 service line. By that, do you mean that the
6 issue was isolated to her service line and not
7 to her neighbors?

8 A. I would say yes.

9 Q. And how did you determine that the
10 issue was likely related to her service line and
11 not to those of her neighbors?

12 A. I had solicited samples from some
13 of the neighbors around for lead and copper.
14 Those samples come back below the action level
15 from what I can recall. Nothing near to where
16 what Ms. Walters had in her house.

17 So that led me to believe her
18 issue was from her service lines. Not only
19 that, but also being in Ms. Walters' house on a
20 couple occasions, I had the ability to inspect
21 her plumbing, seen that it was all plastic
22 plumbing and newer fixtures throughout the
23 house. So my conclusion that lead was coming
24 from the service line.

1 Q. Okay. And this all occurred after
2 February 25, 2015 obviously?

3 A. Yes.

4 Q. Were your conclusions influenced
5 in any way by Croft's e-mail saying to try to
6 isolate the problem to the address, if possible?

7 A. I will say I was -- in a sense, I
8 was already attempting to determine the cause of
9 the problem even prior to Mr. Croft's e-mail.

10 Q. Okay. Would it be fair to say
11 that since there was evidence that it was
12 restricted -- that the issue was restricted to
13 212 Browning, you could also conclude -- you
14 didn't have information that would allow you to
15 conclude that this was a systemwide problem?

16 MS. DEVINE: Objection.

17 A. That is correct.

18 Q. Now, going a little bit back in
19 time. When did you become the operator in
20 charge of the Flint Water Plant again?

21 A. I believe 2011, 2012, somewhere in
22 that time frame.

23 Q. Okay. And we've -- you've been
24 asked questions about various personnel from

1 LAN; is that correct?

2 A. That is correct.

3 Q. Do you recall ever being
4 introduced to them as the operator in charge of
5 the water plant?

6 A. I do not recall.

7 Q. Do you know if they knew that you
8 were the operator in charge of the water plant?

9 A. I couldn't tell you, no. I'm not
10 sure.

11 Q. Okay. Do you recall ever being
12 introduced to personnel from Veolia as the
13 operator in charge of the water plant?

14 A. I do not.

15 Q. Okay. Now, being an operator in
16 charge is something that has to be listed with
17 the state of Michigan, at the time the MDEQ; is
18 that correct?

19 A. That is correct.

20 Q. Okay. So the MDEQ had been on
21 notice that you were the operator in charge of
22 the water plant; is that correct?

23 A. Yes. They were aware. Yes.

24 MR. KIM: Okay. And now we're at

1 the issue where I need at least one more
2 exhibit that I'm waiting to be printed.
3 Can we take five minutes here?

4 THE VIDEOGRAPHER: We are going
5 off the record at 10:18 a.m.

6 (Recess taken.)

7 THE VIDEOGRAPHER: We are back on
8 the record at 10:36 a.m.

9 - - -

10 (Glasgow Deposition Exhibit 86 marked.)

11 - - -

12 BY MR. KIM:

13 Q. Okay. My apologies for the break
14 there to get these exhibits printed.

15 Mr. Glasgow, can you take a look
16 at what has been marked as Exhibit 86.

17 And is this an e-mail that was
18 sent from the director of public works, Howard
19 Croft, to a number of individuals?

20 A. Yes.

21 Q. And does this --

22 MS. JACKSON: Can we have the
23 Bates number, Bill?

24 MR. KIM: Yeah. The Bates number

1 is CROFT - 000000-1011.

2 BY MR. KIM:

3 Q. Okay. And, Mr. Glasgow, so this
4 was an e-mail sent by Howard Croft; is that
5 correct?

6 A. That is correct.

7 Q. And do you see that you're on the
8 distribution list for this e-mail?

9 A. I do see that, yes.

10 Q. And did this e-mail -- essentially
11 was an invitation to attend a meeting -- the
12 first meeting of the city's technical advisory
13 committee?

14 A. Yes, it appears so. Yes.

15 Q. Okay. Do you remember what the
16 technical advisory committee was?

17 A. From my memory, just a group of
18 people, some scientists, I would say. It was an
19 eclectic group of people to kind of respond to
20 the water situation.

21 Q. And by "respond to the water
22 situation," what do you mean?

23 A. Make recommendations, you know,
24 share information, that type of thing.

1 Q. Okay. And you see that this --
2 this meeting -- this first meeting was scheduled
3 for Wednesday, March 4, 2015?

4 A. Yes.

5 Q. And you see that on the invitation
6 list, it includes the name Michael Prysby?

7 A. Yes, I do see that.

8 Q. And you see that it includes
9 Russell Hudson?

10 A. Yes, I do.

11 Q. And that's
12 Russell.Hudson@mclaren.org?

13 A. Yes.

14 Q. Do you know Russell Hudson?

15 A. I don't have any memory of the
16 name.

17 Q. If I was to tell you that Russell
18 is more commonly known as Rusty Hudson, does
19 that spark a memory for you?

20 A. That sounds a little more familiar
21 as a gentleman I had talked to at McLaren.

22 Q. Okay. And you also see that Rob
23 Nicholas from Veolia was on this distribution
24 list?

1 A. Yes.

2 Q. Okay. If you can turn to the
3 fourth page of this packet.

4 A. Okay.

5 Q. You see that there was an e-mail
6 from Russell Hudson that he was asking for
7 clarification about essentially what the meeting
8 was about or what the group was about?

9 A. Yes, I do.

10 Q. And then do you see below that
11 Howard Croft's response to that where he's
12 explaining what the technical committee was?

13 A. Yes, I do.

14 Q. That stretches over onto the top
15 of page 5 there?

16 A. Yes.

17 Q. And you see that this was a --
18 that at least Howard Croft as the director of
19 public works intended this technical committee
20 to be specifically designed for the medical
21 community, the hospitals, and large volume
22 users, such as General Motors?

23 A. Yes.

24 Q. And there was a commitment from

1 EPA and MDEQ for participation on the technical
2 committee?

3 A. Yes.

4 Q. So with that in mind, would you
5 have considered all the persons who were invited
6 to this technical committee to be knowledgeable
7 in their respective fields?

8 A. I would say so, yes.

9 Q. Okay. Do you recall attending
10 that first meeting of the technical committee?

11 A. I do vaguely, yes.

12 (Telephone interruption.)

13 MR. KIM: I think somebody needs
14 to mute their -- thank you.

15 BY MR. KIM:

16 Q. Do you remember what was discussed
17 at the first meeting of the technical committee?

18 Well, first, do you remember if
19 that first meeting of the technical committee
20 occurred on or about March 4, 2015?

21 A. I believe so, yes.

22 Q. Do you remember what was discussed
23 at that meeting?

24 A. Offhand, I do not recall.

1 Q. Okay. Do you remember if there
2 were further meetings of the technical
3 committee?

4 A. Yes. I believe there was almost
5 like a monthly schedule of meetings.

6 Q. Okay. And do you remember
7 attending those meetings?

8 A. I do.

9 - - -

10 (Glasgow Deposition Exhibit 87 marked.)

11 - - -

12 BY MR. GAMBLE:

13 Q. Okay. Can you take a look at what
14 has been marked as Exhibit Number 87. This is
15 Bates number City of Flint_FED_0012286.

16 Okay. And is this the summary of
17 the -- does this document appear to be the
18 summary of the technical advisory committee
19 meeting held on May 20 of 2015?

20 A. Yes, it does.

21 Q. Okay. And do you recall being
22 present at that meeting?

23 A. I do, vaguely, yes.

24 Q. Okay. If you can turn to page of

1 that -- or the second page of that exhibit.

2 A. Okay.

3 Q. Do you see at the bottom that
4 there is a list of attendees?

5 A. Yes, I see that list.

6 Q. Okay. Do you have any reason to
7 question the accuracy of that list of attendees?

8 A. I do not, no.

9 Q. Okay. Do you recall if -- do you
10 recall -- well, let's go back to the first page
11 of the summary there. At the beginning, you see
12 that he was -- that on that summary is listed
13 the introduction of the new utilities
14 administrator Mike Glasgow? That's yourself,
15 isn't it?

16 A. Yes.

17 Q. So you were being introduced as
18 the city's new utilities administrator at that
19 time?

20 A. Yes.

21 Q. And you were asked to give an
22 update on the current water status?

23 A. Yes.

24 Q. And is that summary what you --

1 does the summary list what you were -- what
2 update you provided to the advisory committee?

3 A. To the best of my knowledge, yes.

4 Q. Okay. Down in the discussions --
5 under the "Discussions" heading, you see the
6 number of bullet points listed?

7 A. Yes.

8 Q. Okay. You see that the bullet
9 point listed "Some attention has shifted to lead
10 and copper concerns. Recent internal testing
11 numbers still show approximately two to three
12 out of 100 with high levels"?

13 A. I do.

14 Q. And is that -- does that match
15 with your memory of what was occurring and what
16 the data was showing at that time?

17 A. Yes. To my memory, that's showing
18 the data from that first six-month round of
19 testing from July 2014 through December of 2014.

20 Q. And you see above that, that the
21 health department had listed several items, such
22 as "hard water rash" on the front page of the
23 website with explanations?

24 A. I do, yes.

1 Q. And did that -- was that meant to
2 communicate that the Genesee County Health
3 Department was providing the public with
4 information about some of the common complaints
5 that were being received by the -- that had been
6 received by the city and others since the switch
7 to the Flint River in April of 2014?

8 A. Yes. To the best of my knowledge,
9 yes.

10 Q. And you see that the -- under the
11 "Next Steps," it lists that the next meeting was
12 targeted for late July or early August after the
13 GAC had been installed?

14 A. Yes, I see that.

15 Q. And just to make sure that there's
16 not an uncertainty, GAC stands for granulated
17 activated carbon; is that correct?

18 A. That is correct.

19 Q. And so that's talking about the
20 granulated activated carbon filters that the
21 city was installing?

22 A. Yes.

23 Q. And why was the city installing
24 those filters?

1 A. The granular -- or the GAC we'll
2 use for short. That was used to kind of collect
3 and absorb the TTHM issues we were having.

4 Q. Do you recall why the city chose
5 to go with that method of -- why the city chose
6 to install those?

7 A. That was at the time in my mind
8 and some of our other, I guess I'll say, experts
9 in water treatment, it was kind of the decision
10 that that would be the quickest way to address
11 the issue with TTHMs.

12 Q. And by "other experts in water
13 treatment," are you referring to Veolia and the
14 consultants that the city retained?

15 A. Yeah, I'll refer -- yep, any
16 consultants that the city had at the time.

17 Q. Okay. Do you remember when the
18 next meeting occurred?

19 A. I do not, I hate to say. No.

20 Q. Now, have you read through this
21 summary?

22 A. Yes.

23 Q. Okay. Do you recall any topics
24 being discussed or brought up that are not

1 listed on this summary?

2 A. Not that I can recall, no.

3 Q. And would you agree that the
4 topics that are brought up appear to be a fairly
5 wide range of topics all related to the issues
6 related to the use of the Flint River and the
7 city's water supply?

8 A. I would say so, yes.

9 Q. And was -- was it understood that
10 the purposes of these meetings were for
11 basically all the participants to pool
12 information, share concerns -- and share their
13 concerns?

14 A. Yes, that's a fair statement.

15 Q. And that was so that basically the
16 city could tap into expertise from the community
17 and from other stakeholders in the community?

18 A. Yes.

19 Q. And also so the city could be
20 aware of what concerns were being faced by
21 people -- by other stakeholders in the
22 community?

23 A. Yes, that's a fair statement.

24 Q. So on the list of attendees there,

1 you see that -- if I can just go back to that on
2 the second page. You see that that list
3 included Jim Henry from the Genesee County
4 Health Department?

5 A. Yes.

6 Q. And do you see that attendees
7 included Samir Matta and Warren Green from LAN
8 engineering?

9 A. Yes.

10 Q. Okay. Do you recall if those
11 gentlemen were present?

12 A. I apologize. I do not recall. I
13 would believe they were.

14 Q. Okay. And you see that the list
15 includes Rusty Hudson for McLaren Hospital?

16 A. Yes.

17 Q. Do you recall Rusty Hudson raising
18 any particular issues at this meeting?

19 A. I do not recall.

20 Q. Okay. You also see that Norb
21 Birchmeier from Hurley Hospital is listed?

22 A. Yes.

23 Q. And do you remember Norb
24 Birchmeier raising any issues at this meeting?

1 A. Not that I can recall.

2 Q. Gerald Natzke from DO Genesys
3 Regional Medical Center? Do you see that he was
4 in attendance?

5 A. I do, yes.

6 Q. Do you recall him raising any
7 issues at this meeting?

8 A. I do not recall, no.

9 Q. Okay. Kirk Smith from the Greater
10 Flint Health Coalition?

11 A. I see him listed there, yes.

12 Q. Do you recall him raising any
13 issues here?

14 A. I do not, no.

15 Q. And Pete Levine or Levine from the
16 Genesee County Medical Society?

17 A. Yes, I see him listed. And I
18 don't recall any issues he brought up either.

19 MR. KIM: I think I am finished
20 with my questions.

21 THE VIDEOGRAPHER: We are going
22 off the record at 10:50 a.m.

23 (Pause in proceedings.)

24 THE VIDEOGRAPHER: We are back on

1 the record at 10:54 a.m.

2 - - -

3 EXAMINATION

4 BY MS. JACKSON:

5 Q. Good morning, Mr. Glasgow. My
6 name is Krista Jackson. I represent Stephen
7 Busch. I was there in person yesterday and
8 questioned you. And I just have a few follow-up
9 questions.

10 I'd like to direct your attention
11 to Exhibit 41. Do you have that available to
12 you?

13 A. Yes. One second, please. Okay.
14 I have it in front of me here.

15 Q. Okay. Thanks.

16 And this is a June 10, 2015 e-mail
17 correspondence between you and Michael Prysby;
18 is that correct?

19 A. That is correct.

20 Q. Okay. And so at this time,
21 Mr. Prysby is asking for clarification regarding
22 the Tier 1 sites. And you had discussed this --
23 I believe you testified in February you started
24 having a discussion with Mr. Prysby regarding

1 your inability to be able to determine the type
2 of lines at the homes in Flint; is that correct?

3 A. That is correct, yes.

4 Q. Okay. But in June, at this time
5 you were certifying -- or stating that at least
6 the majority of the sites were Tier 1 sites,
7 right?

8 MR. MARKER: Objection as to form.

9 A. To the best of my knowledge, yes.

10 Q. Okay. Do you recall approximately
11 when the MDEQ started trying to get more
12 information from you with respect to how you
13 were putting together the sampling tool?

14 A. I do not recall.

15 Q. Do you recall that it was prior to
16 this e-mail correspondence?

17 MR. MARKER: Object to form.

18 A. I do not, no.

19 Q. Under the Safe Drinking Water Act
20 and the Lead and Copper Rule, are you required
21 to submit a sample site pool list?

22 MR. MARKER: Objection; form,
23 foundation.

24 A. Yes. To my knowledge, under the

1 rule you are required to submit a sample pool
2 list.

3 Q. And did you do that in 2014?

4 A. I did not.

5 Q. I'm going to direct your attention
6 back to the February 2015 call in which you and
7 Mr. Prysby discussed the sample pool issues that
8 you were having. Do you have any notes or
9 written summaries of that phone call?

10 A. I do not, no.

11 Q. And just to verify, it was just
12 you and Mr. Prysby that were on the phone,
13 correct?

14 A. To my recollection, that is
15 correct, yes.

16 Q. Do you recall testifying about
17 this phone call at all during your preliminary
18 examination testimony?

19 A. I do not recall it offhand, no.

20 Q. And in that phone call, is it
21 correct that Mr. Prysby asked you for a list of
22 the sampling pool?

23 A. I'm sorry. I do not remember.

24 Q. Okay. Going back to the second

1 round of testing, there has been some testimony
2 with respect to the issues you were having
3 trying to obtain a sample pool of 100 samples.
4 You recall that, correct?

5 A. Correct. I do, yes.

6 Q. Now, in determining that you
7 needed 100 samples, was it the MDEQ that
8 originally gave you that number, or did you go
9 into the regulations under the Safe Drinking
10 Water Act and determine that yourself?

11 A. From my recollection, it was
12 determined myself through the Safe Drinking
13 Water Act rules based on the population of the
14 city.

15 Q. And then I believe you testified
16 yesterday that for the second round of testing,
17 the amount of samples that you needed to collect
18 was reduced because of an updated census; is
19 that correct?

20 A. That is correct.

21 Q. Okay. And, again, did you -- were
22 you the one to determine that there had been a
23 new census and that the population of Flint had
24 gone down?

1 A. No, I did not. It was not me.

2 Q. Okay. Who did that?

3 A. To my recollection -- I'm not sure
4 who, but it was someone with the MDEQ. Whether
5 it was Mr. Busch, Mr. Prysby, or Mr. Rosenthal,
6 I can't testify to.

7 Q. Okay. So can you explain to me a
8 little bit about how that went. You contacted
9 them, said "I'm having trouble getting these
10 samples." And then was the next thing that you
11 received just a notification that based on the
12 new population of Flint, you only needed a
13 reduced number of samples?

14 A. I'm trying to recall. I
15 believe -- my memory is a little fuzzy. But I
16 believe I had sent in a copy of the report for
17 the second round of sampling. And I believe it
18 was -- it was sent back, and it may have -- I'm
19 going to say I just -- I don't recall. I don't
20 want to speculate.

21 Q. And did you double check the
22 census numbers and the regulations under the
23 Safe Drinking Water Act to ensure that that
24 reduced pool size was appropriate?

1 MR. MARKER: Objection; form,
2 foundation.

3 A. Based on the population, I did
4 review the Safe Drinking Water Act rules to just
5 confirm what I had been told.

6 Q. Okay. And so in your opinion,
7 that reduced sample size was completely in line
8 with the requirements under the Safe Drinking
9 Water Act, correct?

10 MR. MARKER: Objection; form,
11 foundation.

12 A. I would say so, yes.

13 Q. Is there any authority provided to
14 you, either under the Safe Drinking Water Act or
15 otherwise -- if you weren't able to get enough
16 people to volunteer to take samples, is there a
17 authority for you to do that on your own, to
18 enter homes and obtain those samples?

19 MR. MARKER: To trespass?

20 MR. KIM: Objection as to form.

21 MR. MARKER: Foundation.

22 A. I'm going to say no.

23 Q. Okay. And, similarly, with
24 respect to obtaining samples from the neighbors

1 of LeeAnne Walters', again, you would need
2 people to volunteer to do that, correct, to
3 provide those samples to the city?

4 A. That is correct, yes.

5 Q. Do you recall approximately how
6 many of Ms. Walters' neighbors you approached to
7 provide samples?

8 A. Approximately, I would say, six or
9 eight neighbors right around that residence.

10 Q. Okay. And did you do that -- did
11 you approach them in person? Did you send
12 letters? How was that communication provided?

13 A. Communication was provided by me
14 knocking on doors and talking with the
15 residents.

16 Q. And did you inform them as to the
17 reason that you were asking specifically for
18 samples from their homes?

19 A. Yes. To my recollection, I --
20 without naming Ms. Walters, I just said that we
21 had -- I believe I said there was an issue we
22 had at a residence around here and we wanted to
23 make sure, you know, residents around weren't
24 having the same issue.

1 Q. Okay. And even with that
2 explanation, only two of the people volunteered;
3 is that correct?

4 A. That is correct.

5 MR. MARKER: Objection to form,
6 foundation.

7 Q. With respect to the others -- and
8 I'm sorry if this should be clearer. But did
9 you speak to six to eight other neighbors, or
10 did you knock on doors and there was no answer?

11 A. I did not speak to all six or
12 eight. From what I can recall, it was three or
13 four I spoke to. And then I left Ms. Walters
14 with bottles to try to attempt to contact some
15 of them neighbors as well.

16 Q. Do you know if she did attempt to
17 make that contact?

18 A. From my recollection, she did
19 attempt to make it, and I don't recall any
20 volunteers or any takers, so to speak.

21 Q. And the people that did volunteer
22 to provide you those samples, were they given
23 the same type of bottle and sampling
24 instructions as someone would get if they were

1 just doing it for the six-month rounds of
2 testing?

3 A. Yes.

4 Q. Okay. And all of those samples
5 were also sent to the DEQ lab for analysis?

6 A. That is correct, yes.

7 Q. There was some discussion about
8 this this morning, but who exactly at the city
9 did you discuss either by e-mail or in person
10 the Walters' lead levels with?

11 MR. KIM: Objection as to form.

12 A. I would go back to my e-mail in
13 regards to that, which is one of the exhibits.

14 I believe I e-mailed Mr. Croft,
15 Mr. Johnson, Mr. Bincsik, and Mr. Wright, all of
16 my supervisors, and then the supervisor of the
17 distribution system.

18 Q. Do you recall discussing it with
19 anyone who was not on the e-mail that was --
20 sorry. I don't have that exhibit number in
21 front of me, but the e-mail that you were just
22 referring to?

23 MR. MARKER: It's Exhibit 10 for
24 the record.

1 MS. JACKSON: Thank you.

2 A. I -- I do not recall discussing it
3 with anyone else offhand.

4 Q. Okay. When did you first discuss
5 the Walters' lead levels with someone at the
6 MDEQ?

7 A. Oh, I believe it was in a phone
8 call from Mr. Prysby or Mr. Busch. I don't
9 recall -- or maybe both of them were on the
10 line. But someone at the MDEQ had seen those
11 results via utilizing the state drinking water
12 lab there. And I received a phone call in
13 regards to that.

14 Q. So you did not contact the MDEQ to
15 notify them of these results, correct?

16 MR. MARKER: Objection; form,
17 foundation.

18 A. No, I do not believe so.

19 Q. And are you aware if Ms. Walters
20 contacted the MDEQ directly?

21 A. I am not aware, no.

22 Q. With respect to the technical
23 advisory committee that was put together that
24 you just testified about in response to

1 Mr. Kim's questions, who determined the
2 participants in that advisory committee?

3 MR. KIM: Objection to foundation.

4 A. To the best of my knowledge, it
5 was Mr. Croft, the city's DPW director.

6 Q. And were you the sole
7 representative that worked for the city of
8 Flint?

9 A. I do not believe so. I'd have to
10 look at the list of attendees again.

11 Q. Was participation in this
12 committee voluntary?

13 MR. KIM: Objection as to form.

14 A. I don't believe I'd clarify it for
15 myself as voluntary.

16 Q. And what particularly was your
17 role on the committee?

18 A. Well, seeing that I was the
19 utilities administrator, I was overseeing the
20 water plant and the distribution system, and
21 also the wastewater treatment plant. So it
22 seemed kind of a no-brainer that I would be on
23 the committee.

24 Q. This committee took place after

1 you assumed the role that had been previously
2 held by Mr. Johnson?

3 MR. KIM: Objection as to form.

4 A. That is correct, yes.

5 Q. In late summer and fall of 2015,
6 the city took steps to install an orthophosphate
7 system at the Flint water treatment plant; is
8 that correct?

9 A. Yes.

10 Q. Can you tell me what prompted that
11 action, that installation?

12 A. To my memory, what prompted that
13 installation was a letter from the MDEQ stating
14 that they were going to require the city to
15 install the phosphate system.

16 Q. And that construction and
17 installation continued even after the decision
18 was made to switch back to Detroit water; is
19 that correct?

20 A. That is correct, yes.

21 Q. And what would be the use of that
22 orthophosphate system in conjunction with the
23 use of water from DWSD?

24 A. It was my understanding we were

1 utilizing recommendations from Mr. Lytle and
2 Mr. Schock from the EPA in regards to increased
3 dosage of phosphate in an attempt to rebuild up
4 the phosphate scale on the insides of pipes. So
5 it would be beneficial to add excess phosphate,
6 is what was sent to us, in the Detroit water to
7 help facilitate the formation of that scale.

8 Q. And to the best of your knowledge,
9 was that additional orthophosphate added to the
10 Detroit water at the Flint water treatment plant
11 after the switch back to Detroit water?

12 A. Yes.

13 Q. I'm going to switch to a few
14 questions about Legionella for just a second.

15 You stated -- and correct me if I
16 am wrong -- that you attended two meetings at
17 McLaren with respect to their Legionella
18 concerns?

19 A. That is correct, yes.

20 Q. Was anyone from the MDEQ at either
21 of those meetings?

22 A. No, not that I recall.

23 Q. And did you ever meet with anyone
24 from the MDEQ and representatives of Hurley

1 Hospital?

2 A. Not that I recall, no.

3 Q. Did you ever have discussions with
4 anyone at the MDEQ regarding Legionella concerns
5 in the city in the 2014, 2015 time frame?

6 A. Not that I can recall, no.

7 Q. Do you recall a phone conversation
8 with Mr. Busch and Mr. Prysby in which they
9 stressed that the city needed to take steps to
10 optimize water quality and limit the potential
11 for Legionella?

12 A. Vaguely. I can't put a time frame
13 on that, though.

14 Q. Okay. Give me one moment. I'm
15 just making sure I've covered everything.

16 When you became the utilities
17 director, was there any training or orientation
18 involved in making that switch to a different
19 role?

20 A. No, not that I can recall.

21 Q. Did your -- did the amount of
22 information or the amount of understanding you
23 had of the city's financial process on how
24 projects got funded increase when you took that

1 role on?

2 MR. MARKER: Object to form.

3 A. I will say, yes, there was a
4 slight learning curve from not being that
5 familiar or that involved with that process.

6 Q. Were you in that role when the
7 orthophosphate system permit application was
8 submitted in 2015?

9 A. To the best of my knowledge, I
10 believe so, yes.

11 Q. And were you involved, then, in
12 determining how that project would be funded?

13 A. I will say yes, because from my
14 memory, we had LAN on contract in regards to KWA
15 upgrades. So since they were there, it was just
16 a small addendum to their scope of duties.

17 Q. And did you negotiate that
18 addendum?

19 MR. MARKER: Object to form.

20 A. I do not recall.

21 Q. And in that role as utilities
22 director, did you have to put together a budget
23 for the Flint water treatment plant?

24 MR. KIM: Objection as to form.

1 A. I would oversee the budget -- or I
2 would say verify it, but not truly setting it
3 up. That would come from each of my department
4 heads, what they were requesting. And I would
5 either accept or reject it from what I recall.

6 Q. And at that time, did you take the
7 time to review different contracts with the
8 city's consultant and determine what they had
9 been asked to do and how much they were being
10 paid for those types of services?

11 A. I do not recall.

12 Q. Do you recall, did the budget for
13 LAN's services or Veolia's services at the Flint
14 water treatment plant come directly out of the
15 treatment plant's budget, or was that in a
16 different place within the city's budget?

17 A. I'm not -- I do not recall,
18 because it seems like both of them contracts
19 were prior to me stepping into the utilities
20 director role.

21 MS. JACKSON: Okay. Thank you. I
22 have no further questions.

23 MR. KUHL: Anybody else on the
24 phone have questions?

1 MS. DEVINE: Do you want to go off
2 the record?

3 MR. KUHL: No.

4 - - -

5 (Glasgow Deposition Exhibit 88 marked.)

6 - - -

7 EXAMINATION

8 BY MR. KUHL:

9 Q. Again, Mr. Glasgow, my name is
10 Assistant Attorney General Richard Kuhl. I
11 represent the People of the State of Michigan.

12 I've handed you what has been
13 marked as Exhibit 88. And the Bates number for
14 that document is COF_FED_0137300.

15 MR. GAMBLE: Richard, what was
16 that exhibit number again?

17 MR. KUHL: 88.

18 BY MR. KUHL:

19 Q. So it was 300 through 303. Can I
20 ask you if you've seen this document before,
21 Mr. Glasgow.

22 A. I do not recall seeing this
23 document.

24 Q. Do you know who drafted this

1 document?

2 A. I do not know, no.

3 Q. If you can look at the third page
4 at the bottom. It refers to Howard Croft.

5 Do you see that?

6 A. I do see that, yes.

7 Q. Do you know if Mr. Croft drafted
8 this summary?

9 A. I do not know.

10 Q. This summary relates to a
11 November 7, 2014 meeting in Okemos, Michigan.

12 Do you see that?

13 A. Yes.

14 Q. And that was a meeting between the
15 city, LAN, and MDEQ, correct?

16 A. Correct. Yes.

17 Q. And you're identified as being an
18 attendee at that meeting.

19 Do you see that?

20 A. I do, yes.

21 Q. Does this refresh your
22 recollection about attending a meeting in Okemos
23 with LAN and MDEQ?

24 A. Vaguely, yes.

1 Q. And who were the other
2 participants from the city?

3 A. Mr. Brent Wright, Mr. Daugherty
4 Johnson, and Mr. Howard Croft.

5 Q. And who was there from LAN?

6 A. Mr. Warren Green and Mr. Samir
7 Matta.

8 Q. Do you recall the purpose of this
9 meeting being to discuss the TTHM violation
10 notice that was being sent by the state?

11 A. Yes.

12 Q. And who was hosting the meeting?
13 Was that LAN?

14 A. I believe so, since we were at
15 their offices.

16 Q. There's a section here that talks
17 about the health risks starting at the bottom of
18 page 1 and going over to page 2.

19 Do you see that?

20 A. I do, yes.

21 Q. And we had some discussion about
22 that yesterday, and it was a little unclear.

23 But this refers to a Tier 2
24 notification requirement.

1 Do you see that at the top of
2 page 2?

3 A. I do, yes.

4 Q. And it was a Tier 2 notification
5 requirement for a TTHM violation, right?

6 A. Correct. Yes.

7 Q. And this memo states that under
8 Tier 2, "Tier 2 violations are considered less
9 urgent than Tier 1 violations or situations
10 because there is little immediate risk to
11 consumers."

12 Do you see that?

13 A. Yes.

14 Q. Did I read that correctly?

15 A. Yes.

16 Q. Does that reflect your
17 understanding as to what a Tier 1 -- or excuse
18 me -- a Tier 2 notification was for?

19 A. Yes.

20 Q. This memo also outlines suspected
21 causes of the TTHM violation.

22 Do you see that?

23 A. Yes, I do.

24 Q. Who was it that outlined at that

1 meeting the suspected causes of the violation?

2 A. I do not recall.

3 Q. Do you recall if it was Mr. Green
4 that presented?

5 MR. GAMBLE: Objection; form.

6 A. I can't say I recall.

7 Q. But you are aware that LAN had
8 been retained to prepare the evaluation report
9 for the TTHM violations, right?

10 A. That is correct.

11 Q. I think earlier you testified that
12 you thought they had started work earlier than
13 November on the TTHM violation, correct?

14 A. Correct. Yes.

15 Q. Was it LAN, either Mr. Matta or
16 Mr. Green, that outlined the suspected causes of
17 the violation?

18 MR. GAMBLE: Objection; form,
19 asked and answered.

20 A. I honestly do not recall.

21 Q. Is it your best recollection that
22 that's who would have done it?

23 MR. GAMBLE: Objection; form,
24 asked and answered.

1 A. I would say yes.

2 Q. Under "Suspected Causes:

3 B. Water Treatment Plant Operations," the third
4 one is, "Coagulant or flocculent aids not
5 optimized."

6 Do you see that?

7 A. I do, yes.

8 Q. What was the coagulant that the
9 city was using?

10 A. At that time it was ferric
11 chloride.

12 Q. Now, here it says it's not
13 optimized. Do you recall we looked at the
14 November 18 draft report yesterday, and there
15 was a reference to needing to optimize the
16 ferric levels to the amount recommended in the
17 2002 treatability report?

18 MR. GAMBLE: Objection; form,
19 foundation, mischaracterizes the
20 evidence.

21 A. I do, yes.

22 Q. Is it your recollection that at
23 this meeting held on November 7, 2014, LAN was
24 recommending that you add additional ferric

1 chloride to the levels recommended in that 2002
2 treatability study?

3 MR. GAMBLE: Objection; form,
4 foundation.

5 A. Yes.

6 Q. In this report under "Suspected
7 Causes" under C, they identified distribution
8 problems.

9 Do you see that?

10 A. I do, yes.

11 Q. And they identify three things,
12 correct?

13 A. Correct.

14 Q. Number 1, "Low flow," right?

15 A. Right.

16 Q. Number 2, "Dead ends," right?

17 A. Yep.

18 Q. And number 3, "Too much storage
19 (retention time in the system)."

20 Do you see that?

21 A. Yes.

22 Q. Now, they didn't identify
23 corrosion problems in the distribution system
24 under this section, did they?

1 MR. GAMBLE: Objection; form.

2 A. They did not.

3 Q. They didn't identify lack of
4 corrosion control in this section as a suspected
5 cause, did they?

6 MR. GAMBLE: Objection; form.

7 A. They did not.

8 Q. Now, they also identified possible
9 solutions, didn't they?

10 A. Yes, they did.

11 Q. Now, I think if you look over on
12 the next page under the comments, in the second
13 line, it says, "All of the possible solutions
14 were discussed at length."

15 Do you see that?

16 A. Yes.

17 Q. Do you have any recollection as to
18 how long this meeting took place?

19 A. I do not recall, no.

20 Q. Now, on that second page, it also
21 states in the third line that "The above course
22 of action was agreed upon as the best first
23 steps."

24 Do you see that?

1 A. I'm sorry. What page are you on?

2 Q. Back on the third page. I
3 apologize. Under "Comments," the third line.

4 A. Okay.

5 Q. It says, "The above course of
6 action was agreed upon as the best first steps."

7 Do you see that?

8 A. I do, yes.

9 Q. And under "Possible solutions," E,
10 there's a reference to "coagulant and flocculant
11 polymer aids."

12 Do you see that?

13 A. Yes, I do.

14 Q. And what again was the coagulant
15 that the city was using?

16 A. At that time, ferric chloride.

17 Q. So it seems pretty clear, doesn't
18 it, Mr. Glasgow, that as opposed to some of the
19 earlier suggestions, you knew that LAN was
20 recommending that you add more ferric chloride
21 in early November 2014, didn't you?

22 MR. GAMBLE: Objection; form,
23 foundation.

24 A. I will answer yes.

1 Q. And, oh, by the way, under
2 "Possible Solutions," there's no mention of
3 adding orthophosphates, is there?

4 A. No, there is not.

5 Q. There's no mention of adding any
6 type of corrosion control under "Possible
7 Solutions," is there, Mr. Glasgow?

8 A. No, there is not.

9 MR. KUHL: That's all the
10 questions I have. If I have any
11 additional time, I'll retain it.

12 THE VIDEOGRAPHER: We are going
13 off the record at 11:26 a.m.

14 (Pause in proceedings.)

15 THE VIDEOGRAPHER: We are back on
16 the record at 11:27 a.m.

17 - - -

18 FURTHER EXAMINATION

19 BY MS. SMITH:

20 Q. Mr. Glasgow, I just have a few
21 follow-up questions with respect to this
22 document marked Johnson Exhibit 110.

23 Have you had a chance to review
24 this document?

1 A. I have, yes.

2 Q. And this is an e-mail -- the body
3 of the document is a March 17, 2015 e-mail from
4 Mr. Stephen Busch at the DEQ addressed to Howard
5 Croft. He was the DPW director at the time for
6 the city of Flint, correct?

7 A. Correct. Yes.

8 Q. And Mr. Brent Wright, he was the
9 water plant supervisor at the time for the city
10 of Flint?

11 A. Correct. Yes.

12 Q. And you are listed as a recipient,
13 and you were at the time the laboratory
14 supervisor for the city of Flint?

15 A. Correct. Yes.

16 Q. And then there's Mr. Daugherty
17 Johnson. And at the time, Mr. Johnson was the
18 utilities administrator -- or the utilities
19 director for the city of Flint, correct?

20 A. That is correct. Yes.

21 Q. And then Mr. Ambrose is listed.
22 Who is Mr. Ambrose as of March 17 of 2015?

23 A. I believe he was the city's
24 emergency manager at that time.

1 Q. Okay. And then there's an
2 N. Henderson. Do you know who Henderson was?

3 A. Yes. Ms. Henderson was the city
4 administrator at the time.

5 Q. Okay. And then there's a
6 Mr. Prysby with DEQ. Who was Mr. Prysby with
7 DEQ at the time, to your understanding?

8 A. Yeah, at that time he was the
9 district engineer over municipal supplies in
10 Genesee County.

11 Q. Okay. And you were in regular
12 communication with Mr. Prysby and Mr. Busch of
13 the DEQ during this time frame of March 2015,
14 correct?

15 A. Yes, that's a fair statement.

16 Q. And were you also in regular
17 communication with your colleagues at the city
18 of Flint department of public works listed on
19 this e-mail?

20 A. Yes.

21 Q. Okay. And then it appears from
22 the document that Mr. Johnson forwarded the
23 e-mail to Mr. Green. And that's Mr. Green at
24 LAN, correct?

1 A. Yes.

2 Q. Okay. And the body of the e-mail
3 reads, "As Mike Prysby and I mentioned during
4 our phone call earlier today" -- now, the
5 e-mail's primary recipient is Mr. Howard Croft.

6 But let me ask you if you recall
7 having a conversation with Mr. Busch and
8 Mr. Prysby on or about March 17 of 2015
9 concerning the contents of this e-mail?

10 A. Vaguely, yes.

11 Q. You vaguely -- so to your
12 recollection, you participated in the phone
13 conference referenced in Mr. Busch's e-mail?

14 A. Yes.

15 Q. Okay. And so do you have any
16 understanding, then, as to how Mr. Busch --
17 would it be -- what I'm trying to get to is how
18 did Mr. Busch obtain the information that is
19 described in his e-mail concerning the need to
20 optimize water quality in the city's
21 distribution system which will in turn provide
22 the city's water customers with water quality
23 that helps limit the potential for Legionella
24 occurrence in premise plumbing.

1 MR. MARKER: Form, foundation.

2 Q. Was that information that was
3 provided to Mr. Busch and Mr. Prysby in that
4 March 17 -- or that phone call that occurred on
5 or around March 17 of 2015?

6 MR. MARKER: Same objection.

7 A. From what I recall, yes.

8 Q. Okay. To your recollection,
9 was -- did you have any communication with
10 Mr. Busch and Mr. Prysby about these types of
11 issues prior to March 17 of 2015?

12 Simply put, was that the first
13 time you talked to your contacts at MDEQ about
14 Legionella concerns in the city of Flint?

15 A. From what I recall, yes.

16 Q. Okay. And did -- do you know of
17 any actions Mr. Croft took in response to
18 receiving this e-mail?

19 MR. KIM: Objection as to
20 foundation.

21 A. I do not, no.

22 Q. How about Mr. Ambrose? Do you
23 have any knowledge of any steps Mr. Ambrose took
24 as emergency manager at the time to follow up on

1 the recommendations outlined in this e-mail?

2 MR. KIM: Objection as to
3 foundation.

4 A. I'm not aware of Mr. Ambrose's
5 response.

6 Q. Okay. And in any of your
7 subsequent -- did you have any interactions with
8 Mr. Green at LAN after March 17 of 2015?

9 A. I do not recall. I'm sure I did
10 with the other work LAN was still doing around.
11 But I don't remember any conversation in regards
12 to this e-mail or this phone conference.

13 MS. SMITH: Thank you. That was
14 my next question, so I'll let that be my
15 last question. Thank you very much for
16 the courtesy with the time.

17 THE VIDEOGRAPHER: We are going
18 off the record at 11:32 a.m.

19 (Pause in proceedings.)

20 THE VIDEOGRAPHER: We are back on
21 the record at 11:34 a.m.

22 - - -

23 FURTHER EXAMINATION

24

1 BY MR. MORRISSEY:

2 Q. Good morning, Mr. Glasgow.

3 A. Good morning.

4 Q. This morning counsel for Veolia
5 asked you some questions about the interactions
6 with Mr. Prysby and Mr. Busch before the switch
7 was made.

8 Do you recall that?

9 A. I do, yes.

10 Q. And the questioning, I believe,
11 suggested that you were instructed that
12 phosphates weren't required.

13 Do you recall being asked that?

14 MS. DEVINE: Objection.

15 A. Yes.

16 Q. Now, you didn't make any proposal
17 to DEQ for the use of corrosion control before
18 the switch was made, right?

19 MR. KIM: Objection as to form.

20 MR. MARKER: Objection.

21 A. No.

22 Q. You didn't -- and LAN who was
23 working with you before the switch, they didn't
24 suggest that you use any form of corrosion

1 control, any particular form, correct?

2 MR. GAMBLE: Objection to form,
3 foundation.

4 A. Not that I can recall, no.

5 Q. LAN did not suggest that you
6 needed to complete an optimal corrosion control
7 evaluation before making the switch, correct?

8 MR. GAMBLE: Objection; form,
9 foundation.

10 A. Not that I recall, no.

11 Q. And because you didn't propose any
12 corrosion control and didn't conduct any optimal
13 corrosion control evaluation, DEQ didn't reject
14 any suggestions that you do that, did they?

15 MR. MARKER: Objection; form,
16 foundation.

17 MR. GAMBLE: Objection.

18 A. Not that I recall, no.

19 Q. No one from DEQ suggested it would
20 be a bad idea to have corrosion control, did
21 they?

22 MR. MARKER: Objection; form,
23 foundation.

24 A. No.

1 Q. And when Veolia came on the scene
2 in 2015, they didn't advise you that the fact
3 that you had gone ahead and flipped the switch
4 without optimizing control corrosion was a bad
5 idea that posed a risk to the health of the
6 people of Flint, correct?

7 MS. DEVINE: Objection.

8 A. Correct. Yeah.

9 Q. Counsel for Veolia asked you a few
10 questions about Exhibit 10. If you could get
11 that out.

12 This is the e-mail exchange
13 regarding Ms. Walters' test result, right?

14 A. Yes.

15 Q. And there's an e-mail from
16 Mr. Bincsik reporting he had a discussion with
17 Marvin about the possibility of adding
18 phosphates; is that right?

19 A. That is correct, yes.

20 Q. Now, in Veolia's presentations,
21 they didn't tell you anything about when you
22 should be adding phosphates, right?

23 A. Not that I can recall, no.

24 Q. They didn't tell you anything

1 about adding orthophosphates, right?

2 MS. DEVINE: Objection.

3 A. Right.

4 Q. They didn't tell you that
5 implementing corrosion control right then and
6 there was urgent, did they?

7 A. No, not that I can recall.

8 Q. And they didn't tell you that not
9 implementing corrosion control right then and
10 there could lead to significant damage to your
11 pipe infrastructure and harm to the public
12 health of the people of the Flint --

13 MS. DEVINE: Objection.

14 Q. -- correct?

15 A. No, they did not.

16 Q. Did anyone from Veolia ask you for
17 individual results like Ms. Walters' test
18 results that were part of your ongoing Lead and
19 Copper Rule compliance?

20 A. Not that I can recall.

21 Q. And did anyone from Veolia suggest
22 that an individual elevated result like that at
23 Ms. Walters' home could be indicative of a
24 broader problem in your overall water supply?

1 A. Not that I can recall, no.

2 Q. Counsel for LAN asked you some
3 questions about Exhibit 71, which I spent some
4 time with you yesterday on, which is this
5 June 10, 2013 document that has the Bates number
6 LAN_FLINT_00185409.

7 Do you see that?

8 A. Yes.

9 Q. And if you turn to page 11 of the
10 attachment, which has the Bates number 185422.

11 Do you see this document is signed
12 by Mr. Green and Mr. Matta, right?

13 A. Correct. Yes.

14 Q. And if you turn back to page
15 185412, there's a section "Applicable Law." It
16 says, "This contract shall be governed by and
17 interpreted according to the laws of the State
18 of Michigan."

19 Do you see that?

20 A. Yes, I do.

21 Q. Now, I understand that as counsel
22 for LAN suggested, this was what LAN was
23 proposing as of June 10, 2013. And you don't
24 know what the actual contract that was signed

1 looks like, right?

2 A. That is correct, yes.

3 Q. But you do know that LAN -- you
4 know this one -- this version is signed by LAN.
5 There may be later versions signed by both
6 parties.

7 But a couple things on this are
8 clearly right, right, like the people that I
9 asked you about yesterday who were described on
10 page 185411?

11 A. Yes.

12 Q. And those are the folks from LAN
13 who worked with you, right?

14 A. That is correct. Yes.

15 Q. And these biographies of the LAN
16 employees that began on page 427 with project
17 team, Mr. Green, lists all of his experience
18 with various water plants. Mr. Matta, it lists
19 all of his experience. These are the folks you
20 worked with, right?

21 MR. GAMBLE: Object to form.

22 A. That is correct. Yes.

23 Q. And that work in connection with
24 the switch to the Flint River began within a

1 couple weeks after this, right?

2 A. To the best of my recollection,
3 yes.

4 Q. And counsel for LAN suggested that
5 LAN recommended a 60- to 90-day test run before
6 flipping the switch; is that right?

7 A. Yes.

8 Q. Did LAN say -- ever say, "You
9 can't do this switch without conducting an
10 optimized corrosion control evaluation"?

11 MR. GAMBLE: Objection to form.

12 A. Not that I can recall, no.

13 Q. Are you aware of LAN or anyone
14 from LAN ever conducting a chloride sulfate mass
15 ratio calculation?

16 A. Not to my knowledge, no.

17 Q. Did anyone from LAN ever ask you
18 for the data you would need to conduct the CSMR
19 calculation?

20 MR. GAMBLE: Objection to form.

21 A. Not that I can recall.

22 Q. You're not aware of anything that
23 narrowed LAN's scope of work to exclude
24 consideration of corrosion control, are you?

1 MR. GAMBLE: Object to form.

2 A. No, I am not.

3 Q. You're not aware of anything that
4 narrowed LAN's scope of work to exclude any
5 consideration of public health, are you?

6 MR. GAMBLE: Objection; form.

7 A. No, I'm not.

8 Q. You're not aware of anything that
9 purported to limit LAN's duty as an engineer to
10 look out for public health, are you?

11 MR. GAMBLE: Objection; form.

12 A. No.

13 Q. You're not aware of anything that
14 limited the scope of LAN's work to say they
15 didn't need to consider the impact of your lack
16 of corrosion control on pipe infrastructure in
17 the city, are you?

18 MR. GAMBLE: Objection; form.

19 A. No.

20 Q. You're not aware of anything that
21 gave LAN some kind of free pass for ignoring
22 public health and property damage problems, are
23 you?

24 MR. GAMBLE: Objection; form.

1 A. No, I am not.

2 Q. The meeting that counsel for the
3 state just asked you about in November 2014,
4 this was -- that was more than six months after
5 you'd made the switch, right?

6 A. Correct. Yes.

7 Q. And at that point, you started
8 having these TTHM issues; is that right?

9 A. That is correct. Yes.

10 Q. In that time frame, did anyone
11 from LAN say, "Look, let's conduct a CSMR to see
12 if this water is corrosive"?

13 A. Not that I can recall, no.

14 Q. Did anyone from LAN say, "Look,
15 the fact that you didn't conduct an optimal
16 corrosion control evaluation before flipping the
17 switch might be part of the problem here?

18 MR. GAMBLE: Objection; form.

19 A. No.

20 Q. Did anyone from LAN say, "Look,
21 you really need to get corrosion control in
22 place now to make sure we don't have problems
23 going forward"?

24 MR. GAMBLE: Objection to form.

1 A. No, not that I recall.

2 Q. Earlier today you were asked a few
3 questions about the Langelier index.

4 Do you recall that?

5 A. Yes.

6 Q. And those questions were framed in
7 the context of whether Langelier -- the
8 Langelier index is an appropriate method to
9 assess whether water is likely to be scale
10 forming.

11 Do you recall that?

12 A. Yes.

13 Q. And the Langelier index can be
14 used to assess whether water is scale forming,
15 right?

16 A. Correct. Yes.

17 Q. The Langelier index is something
18 that has existed for decades, right?

19 A. That is correct. Yes.

20 Q. And it's useful for what it's
21 useful for, right?

22 A. I agree. Yes.

23 Q. The issue here is whether the
24 water in Flint was corrosive, right?

1 A. I could agree with that. Yes.

2 Q. And corrosivity can result from
3 things other than whether the water is scale
4 forming, right?

5 MR. MARKER: Objection; form,
6 foundation.

7 A. I will agree with that. Yes.

8 Q. The fluoride sulfide mass ratio is
9 a calculation that has been used to measure
10 corrosion for decades, right?

11 MR. MARKER: Form, foundation.

12 A. Possibly. I became more aware of
13 it in 2015.

14 Q. Right. And during the period from
15 2013 through 2015, you were working with various
16 expert engineers who purported to be expert in
17 water quality, right?

18 A. Yes.

19 Q. You were working with the folks
20 from LAN, right?

21 A. Correct.

22 Q. You were working with the folks
23 from Veolia later in 2015, right?

24 A. Correct. Yes.

1 Q. And none of those people said,
2 "Mr. Glasgow, you really need to conduct a
3 chloride sulfate mass ratio calculation to
4 assess whether this water is corrosive," did
5 they?

6 MS. DEVINE: Objection.

7 MR. GAMBLE: Objection; form,
8 foundation.

9 A. They did not, no.

10 Q. None of them made any
11 recommendation at all about conducting a
12 chloride sulfate mass ratio calculation, did
13 they?

14 MS. DEVINE: Objection.

15 MR. GAMBLE: Object to form.

16 A. No, not that I recall.

17 Q. You were asked a few questions
18 about the technical advisory committee.

19 Do you recall that?

20 A. Yes, I do.

21 Q. Now, the folks on the technical
22 advisory committee, apart from the engineers and
23 the DEQ officials, when they started up in late
24 February '15, did any of these outside folks

1 have any way to know that you hadn't implemented
2 any corrosion control in your water system?

3 MR. MARKER: Objection; form.

4 MR. KIM: Objection as to form and
5 foundation.

6 A. Not that I'm aware of, no.

7 Q. Is there any way these outside
8 folks on the technical advisory committee would
9 have known that you hadn't conducted a chloride
10 mass ratio analysis?

11 MR. MARKER: Form, foundation.

12 A. No, I do not believe so.

13 Q. Is there any way that any of those
14 folks would have known that there was a single
15 page of Mr. Gnagy's handwritten notes that would
16 have allowed them to make a single calculation
17 and determine that the water in Flint was highly
18 corrosive?

19 MS. DEVINE: Objection.

20 A. No, not that I recall.

21 MR. MORRISSEY: That's all I have.

22 THE VIDEOGRAPHER: We are going
23 off the record at 11:48 a.m.

24 (Pause in proceedings.)

1 THE VIDEOGRAPHER: We are back on
2 the record at 11:52 a.m.

3 - - -

4 FURTHER EXAMINATION

5 BY MR. DAWSON:

6 Q. Mr. Glasgow, I just want to make
7 sure I understand the kind of chronological
8 events on a few things that happened that I
9 didn't realize.

10 Yesterday when we talked about you
11 had met with the hospital people in October of
12 2014, did I understand your testimony later on
13 to tell Ms. Smith that after that very first
14 meeting with the hospital folks where they told
15 you they had Legionella in their internal
16 components, that you went across to the closest
17 place you could and measured the city of Flint
18 water to determine if there was any Legionella
19 in that area?

20 Is that what you did?

21 MS. SMITH: Objection; misstates
22 prior testimony.

23 A. I did go across the street to a
24 church/school to monitor for what I had the

1 ability to monitor for. So we checked for
2 coliform bacteria, did a heterotrophic plate
3 count, and also took a chlorine residual, yes.

4 (Reporter clarification.)

5 Q. Chlorine residual level, correct?

6 A. Correct. Yes.

7 Q. And did those tests come back that
8 it was in compliance?

9 A. To the best of my knowledge, yes.

10 Q. And the reason why you didn't go
11 and test the water going into McLaren Hospital
12 is because they had already told you they had
13 tested it and found no problem, correct?

14 A. That is correct.

15 MS. DEVINE: Objection; misstates
16 testimony.

17 Q. So I know Ms. Smith criticized
18 yesterday that the only report I showed you was
19 from December 23rd concerning McLaren's testing,
20 which was supposed to cover a 15-day period
21 between December 5 and December 19, 2014, but
22 you had been told about testing that even
23 predated this testing, correct?

24 A. That is correct. Yes.

1 Q. Have you ever seen the test
2 results from the McLaren Hospital by their
3 consultant as to where those reports are and
4 what they say?

5 A. No, I have not.

6 Q. So you went over to this church
7 and school. You did your testing. How long did
8 that take you approximately? Was it a long
9 time?

10 A. No. A normal bacteria test,
11 results are within 24, 48 hours.

12 Q. All right. And you were asked a
13 number of questions about, "Well, because you
14 did a test at that location, you can't tell what
15 something else is at another location. Then why
16 do you even bother to take testing?"

17 Can you explain that to us?

18 A. Well, my time in the field, any
19 time you collect a sample and you test and you
20 get a result, it's really I guess thought of as,
21 you know, you can verify the water at that
22 particular time, but in a sense, you're still
23 getting somewhat of a representation or a
24 representative sample of what's in the system.

1 Q. And you would think that if you
2 had problems out there with -- like your HPC
3 coming back as problematic, you would know about
4 it, correct?

5 MS. SMITH: Objection; foundation.

6 A. Correct. With some of your data,
7 yes.

8 Q. Yes, sir. And now when you
9 started understanding that McLaren was telling
10 you they had this problem in October of 2014,
11 that information carried over into the next
12 year, 2015; is that correct?

13 MS. SMITH: Objection.

14 A. Yes.

15 Q. And the reason why I ask that is,
16 is I know you were asked a whole bunch of
17 questions yesterday about Veolia folks and
18 whether or not you had any discussions with
19 them.

20 What I'm asking you is, is -- and
21 Veolia became involved in February and January
22 of 2015.

23 Did you ever mention to any Veolia
24 people about the Legionella problem that McLaren

1 had brought up, sir?

2 A. No. I do not recall, no.

3 Q. It wouldn't make a lot of sense
4 that you would tell them, would it, because you
5 already thought that there wasn't a problem with
6 it at that time based upon the testing that you
7 had done and McLaren had done?

8 A. Yes, that's a fair statement.

9 Q. All right, sir. Now, I just want
10 to go through a few more documents.

11 Oh, I remember what I wanted to
12 ask you. There's something called a bug fuzz
13 meeting. Do you know -- did you ever hear that
14 term?

15 A. I don't believe I have, no.

16 Q. You never attended any, I take it?

17 A. No.

18 Q. Fair enough. You just cut out a
19 whole bunch of questions for yourself.

20 A. Hey, all right.

21 Q. Now, you were shown this
22 document --

23 MR. DAWSON: I believe it's

24 Exhibit 86, Mr. Kim? Is this 86?

1 MR. KIM: That would be, yes, 86.

2 MR. DAWSON: Yeah, Exhibit 86 this
3 morning.

4 BY MR. DAWSON:

5 Q. And Mr. Kim asked you a number of
6 questions about when you look over at page 4 of
7 this document and continuing on to page 5,
8 there's a comment as to what type of
9 committees -- there's two separate committees --
10 that were being formed.

11 Do you recall those series of
12 questions?

13 A. I do, yes.

14 Q. Do you have a recollection why the
15 second is a technical committee which is
16 specifically designed for the medical community,
17 the hospitals, and large volume users such as
18 GM -- do you know why that was a separate
19 committee?

20 A. Offhand, I don't. From my
21 recollection, it was kind of to keep the
22 committees a little smaller and manageable for
23 conversation.

24 Q. All right, sir. And there's a

1 number of comments in this exhibit that talks
2 about "Is this going to be an open meeting?"

3 Do you know whether or not the
4 committees for the hospital were an open forum,
5 or were they closed?

6 A. From my recollection, I believe
7 those were closed.

8 Q. Was that at the hospital's
9 request, or do you recollect?

10 A. I do not recall.

11 Q. All right, sir. And then we
12 have -- this is Exhibit 87 that you were shown
13 this morning, the technical advisory committee.

14 Do you remember document, sir?

15 A. Yes, I do.

16 Q. The very first thing it says was
17 to introduce you as your new job, correct?

18 A. Correct. Yes.

19 Q. And it says, "Upgrade on current
20 water status - Mike Glasgow."

21 What were you presenting, if you
22 can recall, back in May of 2015 concerning
23 upgrades of the water status?

24 A. I'm going to have to kind of refer

1 to the bullet points here. I believe I
2 discussed the hardness of the water, as that was
3 being, I'll say, blamed on some of the
4 complaints and the rashes that were being held.

5 And also, according to these
6 bullet points, the TTHM testing and our issues
7 with that, to bring everybody up to speed.

8 Q. Yes, sir. And the reason why I
9 ask, you have updates about current problems.
10 There's nothing about Legionella with your
11 water. Do you see anything in this document
12 about Legionella?

13 A. I do not, no.

14 Q. Now, a fellow was at that meeting
15 called Rusty Hudson who's McLaren Hospital's
16 director of engineering and services. Did he
17 say, "Wait a minute, Mr. Glasgow. We need to
18 talk about Legionella in this meeting"?

19 A. No, not that I recall.

20 Q. He didn't express any problems
21 that he thought existed; is that correct?

22 A. That is correct.

23 Q. And then it says under
24 "Discussions" on page 1 of Exhibit 87 that the

1 Genesee County Health Department hadn't received
2 any water complaints in over 60 days.

3 Does that mean that your group
4 hadn't received them, or just those folks, if
5 you know?

6 A. I would have to say that includes
7 the Flint water plant. So I will say that
8 included all.

9 Q. All right, sir. And then it says,
10 "All independent area testing continues to show
11 water quality to be in line with EPA standards."

12 Do you know whose testing that was
13 referencing, sir?

14 A. I do not offhand. I would -- I
15 would think it would include our testing that we
16 have conducted at the city of Flint.

17 Q. All right. And then, finally,
18 what is the question about bromite levels in the
19 water? What was that brought up about, sir?

20 A. That was in regards to ozone
21 generation. That can be a byproduct of ozone
22 addition to the water.

23 Q. All right. Now, I have a
24 document -- and I can't find one that correlates

1 perfectly with it. It's an e-mail from Liz
2 Murphy, and I'll just --

3 MR. DAWSON: We'll need to mark
4 that one. I apologize.

5 - - -

6 (Glasgow Deposition Exhibit 89 marked.)

7 - - -

8 BY MR. DAWSON:

9 Q. I've put before you a document
10 from an e-mail chain that shows Liz Murphy wrote
11 on November 3, 2014 to various people concerning
12 "McLaren Hospital Update."

13 Do you see that, sir?

14 A. Yes, I do.

15 MR. KIM: What's the Bates number?

16 MR. DAWSON: Yes, sir. It's

17 COF_FED_0137795.

18 MR. KIM: Thank you.

19 MR. DAWSON: Yes.

20 BY MR. DAWSON:

21 Q. It says, "Everyone. Just wanted
22 to update everyone on the McLaren Legionella
23 investigation. On Thursday, October 30, I was
24 invited back to McLaren for a meeting with their

1 constituents and a representative of the Genesee
2 County Health Department."

3 That person who's giving that
4 update is you; is that correct?

5 A. That is correct, yes.

6 Q. So I know you told us you had an
7 early October meeting. This is a second meeting
8 on October 30th?

9 A. Correct.

10 Q. All right, sir. It says, "Since
11 the original investigation from a few weeks ago,
12 McLaren has chlorinated their water system and
13 conducted another round of Legionella testing.
14 The numbers were dramatically lower, but there
15 was still evidence of the contamination, so they
16 are planning another chlorination of their
17 system, and at least two more sampling events."

18 So they told you that they needed
19 to do more work; is that right?

20 A. Yes. That was part of our
21 discussion at the meeting.

22 Q. And then you say, "There has been
23 no evidence of Legionella in the water coming
24 into the hospital from the city supply during

1 their sampling events."

2 You're talking about what they
3 reported to you, McLaren, correct?

4 A. Correct. Yes.

5 Q. So wouldn't you think that if
6 someone was having a problem with Legionella and
7 they thought it was from your water source,
8 you'd be getting a lot of written complaints
9 from them?

10 MS. SMITH: Objection; calls for
11 speculation.

12 A. Yes, that would be possible. Yes.

13 Q. Have you ever seen a single letter
14 or e-mail written from McLaren Hospital to the
15 city of Flint directed to you or anybody else in
16 water saying, "Your lousy water is causing
17 Legionella in our hospital facility"?

18 A. I have not, no.

19 Q. Turn to Johnson 142, please, sir.

20 I believe you've got that right
21 there in front of you. We pulled it out. Here,
22 I'll just -- here's a couple if you don't have
23 it.

24 A. I'll double check just to make

1 sure. Oh, yeah, that is the one I had. Sorry.

2 Q. That's okay.

3 I just made a few edifications
4 here. This is Mr. Earley. We've already talked
5 about, where it says, "Therein lies our
6 message - an internal issue at McLaren that they
7 are working on with our assistance."

8 That was true, wasn't it?

9 A. Yes. At the time, to the best of
10 my knowledge, yes.

11 Q. And that was October 3rd. That
12 was the first time you had a meeting with those
13 folks, correct, early October?

14 A. Correct. Yes.

15 Q. And then he says, "Not a Flint
16 water problem, but they are trying to resolve."

17 Again, that is a true statement,
18 correct?

19 A. Correct.

20 Q. And you based that upon your
21 testing, as well as what McLaren told you their
22 testing showed?

23 A. That is correct, yes.

24 Q. And then we go down here, and it

1 says -- I think there was some complaints about
2 you here that you hadn't told one of your
3 superiors something about this issue.

4 Do you recall that, getting some
5 unhappiness directed to you about that, sir?

6 A. Yeah. It looks that way, yes.

7 Q. All right. "Mike's supervisors
8 did know about this. I got a call from the
9 president of McLaren last week. I immediately
10 called Howard who was with the mayor and asked
11 him to have my Mike contact McLaren's head of
12 engineering. They determined that there was no
13 issue with the Flint water coming into the
14 hospital. They had an internal issue. Mike
15 attended their internal meeting to offer advice.
16 That is 'Flint working with McLaren.'"

17 You remember that, don't you?

18 A. I do, yes.

19 Q. Again, the president of the whole
20 hospital called to report that they found it was
21 their problem, right?

22 A. Yes. According to this e-mail,
23 yes.

24 Q. And then if you turn to the second

1 page of that document. Highlighted it says,
2 "After talking with Mike Glasgow from our water
3 plant, he confirmed that he was helping the
4 hospital conduct testing for bacteria."

5 That's true, isn't it?

6 A. Yes. Yes, I reported to them that
7 I would do what was in my power to test.

8 Q. "And they are flushing their
9 system with chlorine as part of their routine
10 method of abating these type of issues."

11 Do you recall them telling you
12 that?

13 A. Yes.

14 Q. And then look at this next
15 paragraph. "I also spoke to McLaren's
16 communications director, Laurie Prochazka, who
17 said that they did not release anything to the
18 public. Instead, ABC 12 was sent an internal
19 memo meant only for employees to inform them of
20 the cleaning procedures."

21 Did you know that they were only
22 telling their own folks but not the public?

23 A. I did not, no.

24 Q. So did you ever meet this --

1 what's her name -- lower Prochazka is a?

2 A. Not that I recall.

3 Q. She wasn't one of the people at
4 the multiple meetings you had, sir, with the
5 McLaren folks?

6 A. Not that I can recall.

7 Q. All right. Now, based upon what
8 you know from your technical position that you
9 held at the city of Flint, do you or do you not
10 believe that you discharged your duties for
11 making sure that there was not bacteria growing
12 in the city of Flint water system such that it
13 would be causing Legionella when it was
14 transmitted to McLaren Hospital?

15 MS. SMITH: Objection; form and
16 foundation.

17 A. I'll answer that and say I did
18 what was within my power to try to verify that.

19 Q. And you had two ways of doing
20 that; with your own testing and McLaren's; is
21 that correct?

22 A. That is correct, yes.

23 Q. And never received a single report
24 from McLaren Hospital people that they found

1 Legionella in the water that was coming into
2 their system before it got inside it?

3 MS. SMITH: Objection. Time
4 frame?

5 A. That is correct.

6 Q. At any time?

7 A. That is correct.

8 Q. Now, where McLaren sits relative
9 to your distribution system, do you recall the
10 layout of the distribution system, the water
11 distribution of Flint?

12 A. Yes, I do.

13 Q. Is McLaren toward the end of the
14 distribution system on one of the main arteries
15 or not?

16 A. Yeah. They're kind of located on
17 the west side of the city.

18 Q. Yes, sir. And did they report to
19 you when they were getting Legionella in their
20 internal components, it was also kind of in
21 areas that were toward the end of their
22 distribution, or did you ever have that
23 discussion with them?

24 A. I don't believe I had that

1 discussion with them.

2 MR. DAWSON: That's all the
3 questions I have. Thank you so much,
4 sir.

5 THE WITNESS: No problem.

6 THE VIDEOGRAPHER: We are going
7 off the record at 12:08 p.m.

8 (Pause in proceedings.)

9 THE VIDEOGRAPHER: On the record
10 at 12:09 p.m. This concludes the
11 deposition, and we are off the record at
12 12:09 p.m.

13 - - -

14 Thereupon, at 12:09 p.m., on Wednesday,
15 February 26, 2020, the deposition was concluded.

16 - - -

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1 CERTIFICATE

2 STATE OF MICHIGAN :

SS:

3 COUNTY OF _____:

4

5 I, MICHAEL B. GLASGOW, do hereby certify
6 that I have read the foregoing transcript of my
7 cross-examination given on February 26, 2020; that
8 together with the correction page attached hereto
9 noting changes in form or substance, if any, it is
10 true and correct.

11

MICHAEL B. GLASGOW

12

13 I do hereby certify that the foregoing
14 transcript of the cross-examination of MICHAEL B.
15 GLASGOW was submitted to the witness for reading and
16 signing; that after he had stated to the undersigned
17 Notary Public that he had read and examined his
18 cross-examination, he signed the same in my presence
19 on the _____ day of _____, 2020.

20

21 _____
NOTARY PUBLIC - STATE OF MICHIGAN

22

23 My Commission Expires:

24 _____, ____.

CERTIFICATE

I, Carol A. Kirk, a Registered Merit Reporter and Notary Public in and for the State of Michigan, duly commissioned and qualified, do hereby certify that the within-named MICHAEL B. GLASGOW was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in the cause aforesaid; that the deposition then given by him was by me reduced to stenotype in the presence of said witness; that the foregoing is a true and correct transcript of the deposition so given by him; that the deposition was taken at the time and place in the caption specified and was completed without adjournment; and that I am in no way related to or employed by any attorney or party hereto or financially interested in the action; and I am not, nor is the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Dexter, Michigan on this 9th day of March 2020.

CAROL A. KIRK, RMR, CSR-9139
NOTARY PUBLIC - STATE OF MICHIGAN

My Commission Expires: August 19, 2022.

- - -

1 DEPOSITION ERRATA SHEET

2 I, MICHAEL B. GLASGOW, have read the transcript
of my deposition taken on the 26th day of February
3 2020, or the same has been read to me. I request that
the following changes be entered upon the record for
4 the reasons so indicated. I have signed the signature
page and authorize you to attach the same to the
5 original transcript.

6 Page Line Change and Reason:

7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____
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22	_____	_____	_____
23	_____	_____	_____

24 Date _____ Signature _____